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ABSTRACT

This report summarizes the conceptual framework, findings, and methods of the Teacher Beliefs Study, an intensive, two-year program of research on the structures and functions of teachers' belief systems. Eight teachers in three school districts were videotaped over the course of a semester and were interviewed for a total of approximately 20 hours (using a variety of techniques, including stimulated recall and "repertory grid" interview techniques). The first chapter of the report develops a conceptual framework for the analysis of beliefs, drawing on recent research on the nature of cognition in complex or "entangled" environments. The second chapter describes the contexts of the three schools in which the teachers were observed, and discusses the possible implications of these settings for teachers' practices. The third chapter presents a set of eight case studies describing the nature and operations of a core set of the beliefs of the teachers in the sample. Chapter four then speculates on the implications of the findings for future research and teacher education practice. Methodology is discussed in three appendices. A 10-page list of references concludes the document. (Author/JD)

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THE ROLE OF BELIEFS IN THE PRACTICE OF TEACHING: FINAL REPORT OF THE TEACHER BELIEFS STUDY

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R&D Center for Teacher Education
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Abstract

This report summarizes the conceptual framework, findings, and methods of the Teacher Beliefs Study, an intensive, two-year program of research on the structures and functions of teachers' belief systems. Eight teachers in three school districts were videotaped over the course of a semester and were interviewed for a total of approximately 20 hours (using a variety of techniques, including stimulated recall and "repertory grid" interview techniques). The first chapter of the report develops a conceptual framework for the analysis of beliefs, drawing on recent research on the nature of cognition in complex or "entangled" environments. The second chapter of the report describes the contexts of the three schools in which teachers were observed, and discusses the possible implications of these settings for teachers' practices. The third chapter presents a set of eight case studies describing the nature and operations of a core set of the beliefs of the teachers in the sample. Chapter four then speculates on the implications of the findings for future research and teacher education practice. Methodology is discussed in three appendices. Appendix A describes teacher selection. Appendix B describes the repertory grid interviews. Appendix C discusses the videotaping of classrooms and the stimulated recall interviews.

Acknowledgments and Disclaimers

Along with the author, three other researchers were involved in the Teacher Beliefs Study. Criss Cloudt McCuller negotiated access to the sites, helped formulate the methodology of the study, and helped collect data on two of the Countryside teachers. Frank Campos helped interview and observe the other six teachers in the study. Sarah Dennard was responsible for videotaping all eight teachers, a task she performed with a good will, in spite of the constant breakdowns in the antique equipment she had to use. The present author is alone responsible for the interpretation given here to the data jointly collected.

Thanks must also be given to the eight teachers who participated in the study, as well as to the principals and vice-principals of their schools. To protect confidentiality, all must be referred to by pseudonyms in this report.

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THE ROLE OF BELIEFS IN THE PRACTICE OF TEACHING: FINAL REPORT OF THE TEACHER BELIEFS STUDY

Introduction

This report summarizes the conceptual framework, findings, and methods of the Teacher Beliefs Study (TBS), an investigation of the structures and functions of teachers' "beliefs" about their roles as teachers, their students, the subject matter areas they teach, and the schools they work in (for other reports from the project, see Nespor, 1984a; 1984b; Nespor, Cloudt McCuller & Campos, 1984).

The TBS arose as a way of addressing two questions relating to an oft-noted "problem" in research on teacher education: the fact that teachers' practices are heavily influenced by their experiences in classrooms--more so, indeed, than by their formal training. Lortie (1975, pp. 61-67), for example, argues that teachers "internalize" modes of practice while serving an "apprenticeship-of-observation" as students. He concludes (Lortie, 1975):

> that education students have usually internalized . . . the practices of their own teachers. If teachers are to adapt their behavior to changed circumstances, they will have to be freed of unconscious influences of this kind; what they bring from the past should be as thoroughly examined as alternatives in the present. (p. 230)

Teachers are thus said to have learned about teaching while they themselves were students. Lanier (1984) also stresses that teachers acquire many of their practices in the course of teaching:

> Teachers learn to think that the way to learn more about teaching is through trail and error, not through careful thought and scholarship. What is considered most important is whether a particular technique or approach seems to give immediate practical success. (p. 85)

For both Lortie (1975) and Lanier (1984), the influence of experience is seen as primarily negative. Lortie sees it as an impediment to "scientific modes of reasoning," while Lanier sees it as the antithesis of "careful thought and scholarship." Neither, however, explains why experience plays

such a heavy role in learning to teach, although by implication they seem to suggest that it has something to do with the poor quality of teacher training. And yet there are some puzzling aspects to these arguments. Lortie claims that the internalization of teaching practices is "unconscious," yet all of his data are based on interviews in which teachers explained how and why they drew upon practices they had observed as students (Lortie even stresses that the teachers generally "volunteered," such statements, p. 63). In what sense, then, does this borrowing represent "unconscious internalization"? Similarly, how is the "trail and error" strategy Lanier notes inconsistent with "careful thought"? Trail and error may be an inefficient way of generating knowledge, but if it is to succeed in any way it requires careful attention and reflection. The point of these comments is simply to raise the issue: why is experience important to the way teachers teach? And how, exactly, is this influence manifested?

The Teacher Beliefs Study was centered on the thesis that "experience" operates through a dialectical relationship between "beliefs," and contextual constraints encountered in the work contexts of teaching--a relationship which functions to enable teachers to define the tasks of teaching. This thesis was premised upon a set of assumptions: that teachers act in a goal-directed fashion, and that in order to understand why teachers act in a certain manner, one must examine their goals and the ways these goals are articulated with work contexts and the tasks within those contexts. Too often teachers' goals and tasks have been defined a priori by researchers and teacher educators: We investigate whether or not teachers keep students "on-task," raise their test scores, impart to them higher level problem-solving skills, and so on, without inquiring into whether or not the teachers were trying to do these things in the first place. Such a procedure may be acceptable if the aim is merely to evaluate or assess

teachers, but it is hardly adequate if the aim is to understand the bases of teachers' practices.

It is one of the arguments of this report, to be elaborated in the first chapter, that teachers' "beliefs" about teaching play a crucial role in the way they formulate goals and define the tasks of teaching. To the extent that such beliefs are ignored, the systems of practices they guide or make sense of will be correspondingly opaque. At a superficial level, this may result in one measuring or analyzing aspects of the classroom which have no salience for the participants, or, conversely, it may lead one to overlook or ignore features of the situation which greatly influence those involved in it. At a deeper level, failing to attend to beliefs leaves the researcher in the position of being able to develop only an abstract model of the regularities or structures underlying classrooms processes -- the functions and uses of classroom stuctures, and the social "rules" governing their use, remain hidden.

The effort to "understand," and not merely assess, evaluate, or describe, teachers' practices is not, moreover, a matter of mere academic curiosity. If the ultimate goal of research on teaching is to shape, direct, or improve the practices of teachers, then the reasons that teachers have for acting as they do--reasons which make them more or less amenable to advice and training--must be examined. As already noted, it seems highly likely that teachers and even prospective teachers have conceptual systems--no matter how implicit and unsystematized these may be--for making sense of, evaluating, and justifying the things that go on in classrooms. It is not enough to simply decry the existence of these conceptual systems, or to view them as things which need to be overcome: one has to at least consider the possibility that these ways of thinking exist because they "work" well and enable teachers to do their

jobs better than would the knowledge the teachers gain in schools of education. Training cannot be conceptualized as a simple matter of pouring knowledge and skills into empty heads. As Fenstermacher (1979) argues, "there is a critical difference between studying what makes teachers effective and teaching teachers to be effective" (p. 175): one has to build upon or displace existing systems of beliefs and knowledge that may well have strong functional justifications.

In this respect, the greatest value of the present study may be that it traces--in a brief but reasonably detailed manner--some of the ways the belief systems of the teachers participating in the study operated to make their classroom practices seem comprehensible and reasonable. What the accounts reveal is that the teachers were pursuing goals more complex and varied than the officially prescribed functions of their courses might imply, and that regardless of whether an "objective" observer would consider them "effective" or "ineffective," the teachers were all acting according to reasons which made sense to them--they were all successful and effective in terms of what they considered the goals of their teaching to be.

The TBS thus has several related agendas. It is an attempt to explore a neglected substantive area, a task which entails, first, developing at least the outlines of a conceptual framework for dealing with beliefs. Second, the study is an attempt to provide richly detailed descriptions of some characterisitic functions of the beliefs of a sample of teachers, and to show how these beliefs operate to allow teachers to use--and survive--their experiences. Finally, the study attempts to examine some basic assumptions about research on teaching and teacher education in light of the findings of the study.

It should be obvious that the issues outlined above cannot be thoroughly addressed and evaluated by a single, small-scale study such as the TBS. Instead, what the TBS has done is to examine these issues in an

empirically grounded fashion by investigating the structures and functions of teachers' beliefs, and trying to analyze where these beliefs might derive from and how they might be influencing teachers' conceptions of their work and their work practices. The aim of this report, then, is to present the findings of this research, to talk about some of its theoretical and practical implications, and to describe how the research was actually carried out.

The remainder of this introduction provides an overview of the study and the teachers who participated in it. The descriptions will be very brief, as these subjects are treated in great detail in the body of the report and in its appendices.

The first chapter of the report presents brief definitions or models of the concepts of "beliefs" and "belief systems" used by the TBS. The aim is basically to give the reader a rather abstract schema of the nature of the entity the report focuses on. The substantive discussion of teachers' belief systems comes in the third chapter.

The second chapter deals with the school settings in which the teachers in the study worked. Each of the three sites are described, and the possible implications of differences across sites for teachers' activities are examined.

Chapter Three then presents case studies of the eight teachers who participated in the project. These case studies focus on the teachers' background and training, their beliefs about their roles and aims in the classroom, and the ways in which they attempt to attain these aims.

The fourth and concluding chapter of the report tries to draw from the study some conclusions or generalizations about teachers, their beliefs, and the functions of these beliefs, and suggests their possible relevance to future research or teacher education practice.

There are then three appendices. The first of them very briefly describes the ways in which teachers were selected to participate in the study.

describes the ways in which teachers were selected to participate in the study. The two other appendices, focusing on the interviewing methods used in the study, are somewhat more technical. The first examines the the "repertory grid" interview techinque, the second looks at the "stimulated recall" interview.

Overview of the Design of the Study

The Teacher Beliefs Study was designed to explore the nature and functions of teachers' beliefs across different domains of activity in a variety of contextual arenas and work settings. To do this, two types of data were needed. First, if we were to understand why teachers did what they did, we had to know what they were doing--there had to be some way of determining just what and how the teachers were teaching. This problem was attacked in two ways: The classrooms of teachers were videotaped and observers wrote detailed descriptions of what the teachers had done (using the videotapes as resources for constructing verbatim records of what the teachers talked about).

Second, and most obviously, the project needed data on the teachers' beliefs about teaching in general, about their subject matter areas, and about the schools they worked in; as well as data about the ways in which these beliefs were applied or invoked in specific instances of classroom interaction. Two types of interviews (described in detail in appendices) were used to get these data. First, four long, semi-structured, and wide ranging interviews (called "repertory grid" interviews, see the appendix for an explanation) focused on the teachers' general principles and beliefs about teaching, about their students, about student behavior, and about the community and organizational contexts in which they worked. A second sort of interview (there were also four of these) then focused on the ways the teachers explained their teaching practices. These were called "stimulated recall"

interviews because they consisted of the interviewers showing the teachers videotapes of their classrooms and asking them to explain what was going on on the tape (i.e., the tapes "stimulated" the recall and reflection).

Because all of these interviews were very time-consuming (e.g., the total time spent in interviews with each teacher averaged around 20 hours) only a small sample of teachers (eight in all) could be studied. Some characteristics of this sample are given in Table 1.

Research Sites

One of the issues that the TBS sought to examine was the potential influence of community and school contexts on teachers' beliefs and classroom practices. To this end, data collection was carried out in three contrasting sites. Skeletal descriptions of these sites are given below. (In all of the discussions that follow, pseudonyms are used when referring to schools and school personnel).

Countryside. Four of the eight teachers in the TBS sample worked at Countryside, a rural junior high school with an enrollment of about 700 students in grades six through eight. Countryside was a predominantly Anglo school, with Blacks representing about 18% of the student body, and Hispanics about 15%. The school was located in a small town (with a population of less than 4,000), but it drew a large percentage of its students from the surrounding rural areas and from smaller communities nearby. At the time of the study Countryside was the sole junior high in the district and the total school district enrollment in grades one through twelve was about 2,500. The community and the school district were both relatively poor. A large portion of the population was below the poverty level, according to U.S. Census figures, and the district itself had a very low tax base and little money for improving facilities or increasing teacher salaries.

Table 1

Characteristics of Participating Teachers

Countryside

Pseudonym	Sex	Ethnicity	Approx. Age	Subject & grade level	Years of Experience	Semester studied
Mr. Larson	M	Anglo	41	7th grade Texas History	15	Fall 1982
Ms. Skylark	F	Anglo	31	8th grade English	5	Fall 1982
Ms. Marsh	F	Anglo	33	8th grade American History	8	Spring 1983
Mr. Ralston	M	Black	47	8th grade Math	22	Spring 1983

Cityside

Pseudonym	Sex	Ethnicity	Approx. Age	Subject & grade level	Years of Experience	Semester studied
Ms. Richards	F	Anglo	38	8th grade English	13	Fall 1983
Mr. Franklin	M	Anglo	40	8th grade American History	9	Fall 1983

Middleburg

Pseudonym	Sex	Ethnicity	Approx. Age	Subject & grade level	Years of Experience	Semester studied
Ms. Hunt	F	Anglo	26	8th grade Math	5	Spring 1983
Ms. Cargill	F	Anglo	48	7th grade Texas History	9	Spring 1983

Cityside. The second major site of the TBS, Cityside school, provided a sharp contrast to Countryside, though the two sites were only about an hour away from each other by automobile. Cityside was one of ten middle schools (grades seven and eight) in a middle-sized city with a population of about 350,000. The total enrollment of the district (grades kindergarten through twelve) was around 54,000. Cityside's enrollment was approximately 500. In rounded figures, about 45% of the students were Anglo, 28% were Black, and 25% Hispanic. A majority of the Anglo students were from upper middle class backgrounds and lived near the school. The majority of Black and Hispanic students were bused to the school from low income neighborhoods on the other side of town. Two of the teachers in the sample were drawn from Cityside school.

Middleburg. The third site of the TBS, Middleburg school, had a rather unusual setting. It was the sole middle school (grades seven and eight) of a geographically large district which included both predominantly Black and Hispanic urban neighborhoods, and many small rural communities of various ethnic compositions. The total enrollment of the school district (kindergarten through twelfth grades) was around 4,000, while Middleburg itself had around 600 students, with the student body almost evenly divided among Anglos, Blacks, and Hispanics.

In Chapter Two these schools are examined in much greater detail. First, however, one of the major conceptual underpinnings of the project is examined--the conceptualization of beliefs that guided the research. This is the subject of Chapter One.

CHAPTER ONE:
CONCEPTUAL FRAMEWORK: THE NATURE OF BELIEF SYSTEMS

The purposes of this chapter are to describe the characteristic features of "beliefs" and "belief systems," and to explore the principal ways in which they play a role in everyday thinking. Before beginning this discussion, however, there are two caveats to be made. The first is that the use of the term "beliefs" is to some extent arbitrary. The focus of the study could just as easily have been called teacher "ideologies," "implicit (or explicit) theories," "opinion systems," or something along those lines. There is no assertion of a claim for priority in the use of the term "beliefs," nor does it seem useful to try to explicitly differentiate the use of the term here from the uses of the term in other bodies of research (the interested reader should have no trouble doing this if he or she so desires).

The second caveat is that the framework for conceptualizing beliefs advanced here is by no means complete or completely systematized. Indeed, even the features discussed below should not be taken as unambiguous markers of beliefs. As Abelson (1979) suggests, they represent prototypical characteristics of belief systems, rather than necessary and sufficient conditions for defining them. It is the conjunction of the various characteristics that distinguishes beliefs from knowledge.

What are "Beliefs"?

"Belief systems" have been conceptualized in at least two different, though not necessarily incompatible, ways. One line of thought has focused on the structural characteristics which distinguish "beliefs" from other forms of knowledge, while a second line of analysis has looked at the ways belief

systems function or operate in everyday thinking. These perspectives are examined in turn below.

The Structure of Beliefs

Abelson (1979) and others have suggested that useful distinctions can be made between the structures of "beliefs" and "belief systems" on the one hand, and knowledge and knowledge systems on the other. Four features--"existential presumption," "alternativity," "affective and evaluative loading," and "episodic structure"--have been suggested as distinguishing characteristics of of beliefs themselves. Two other features--"nonconsensuality" and "unboundedness"--have been used to characterize the ways beliefs are organized as systems.

Existential Presumption. Abelson (1979) suggests that belief systems frequently include propositions or assumptions about the existence or nonexistence of various types of entities. Abelson points to beliefs in God, ESP, or assassination conspiracies as examples of such beliefs, but existential presumption also occurs in less obvious ways at much more mundane levels of thought. In the case studies of teachers, for example, we shall see that both of the math teachers involved in the research held strong beliefs about the existence of certain student characteristics such as "ability," "maturity," and "laziness." These were not simply terms used to describe aspects of students' behaviors. Rather, the terms corresponded to entities which holistically characterized the students. This is a potentially important difference because there is a very strong tendency, when such characteristics are conceptualized as entities, as inherent components of students' personalities, for the teachers to see the characteristics as immutable as well--as things beyond their control and influence. Thus, if some students cannot learn because they lack "ability," there is nothing to be done about this but to see to it that the environment is arranged so as to

minimize trouble for both the teacher and the students (e.g., give the students easy work and decent grades in return for good behavior). Similarly, if the students lack good working habits because they are "immature," there is nothing to be done about this but to wait for the maturity to come at its own pace.

As these examples should suggest, beliefs about the existence of entities frequently stem from the "reification" of transitory, ambiguous, conditional or abstract entities into stable, well-defined, absolute and concrete entities (for an analysis of one of the classic instances of reification, see Gould's, 1980, study of the reification of intelligence test scores into unambiguous indications of inherent, immutable, and genetically determined mental capacities).

Alternativity. A related point made by Abelson (1979, pp. 357-358) is that belief systems are often concerned with representations of "alternative worlds" or "alternative realities." Again, Abelson (1979) tends to use extreme examples (e.g., the social or cosmic orders envisioned by utopian political or religious movements), but the feature is much more commonplace than these would suggest. Many of the teachers in the study, for example, envisioned and strived to establish particular types of interactional systems or classroom relations of which they had no direct experience or knowledge (nor were these abstract models they had learned in their formal training). Thus, to give but one instance, one of the English teachers in the study, Ms. Skylark, drew her ideal of teaching from a model of what she had wanted classes to be like when she herself was a child (i.e., friendly and fun), and worked to shape her class to that ideal. She had never achieved this ideal, nor had she experienced it as a child. It was, instead, a sort of utopian alternative to the sorts of classrooms she was familiar with. Beliefs of this

sort can be of great importance in the classroom (just as they are in the political realm). They are, in a strict sense, overriding concerns, and any number of shortcomings and problems can be justified in terms of their pursuit. They are not amenable to falsification--or even challenge--and failures to attain them in no way diminish their value. They thus have a great positive value in that can provide hope and encouragement, even when the struggle itself seems almost hopeless.

In essence, then, "alternativity" refers simply to conceptualizations of ideal situations significantly different from present realities. As Abelson (1979) puts it, beliefs such as these:

> must elaborate how present reality operates deficiently, and what political, economic, social (etc.) factors must be manipulated in order to eliminate the deficiencies. This is, to be sure, a kind of problem solving, but at a more abstract level than the usually studied problem-solving tasks in cognitive psychology. It is not a matter of finding the sequence of rules to apply to a starting state to reach a goal, it is a matter of rejecting the old rules and finding new ones which achieve the goal state. (pp. 357-358)

Beliefs can therefore be seen as means of defining goals and tasks, whereas knowledge systems, by contrast, take goals as givens and are shaped and determined by the nature of the problem or task confronted.

Affective and Evaluative Aspects. Belief systems can be said to rely much more heavily on affective and evaluative components than do knowledge systems (Abelson, 1979, p. 358). Feelings, moods, and subjective evaluations in terms of personal preferences seem to operate more or less independently of other forms of cognition typically associated with knowledge systems (Zajonc, 1980), though there is clearly a great deal of interaction between the systems (as, for example, the work on state-dependent recall demonstrates, e.g., Bower, 1981). Thus, knowledge of a domain can be conceptually distinguished from feelings about that domain. One's knowledge of the rules of chess and various lines of play does not depend upon whether one likes or dislikes

chess, whether it excites or bores one, whether one thinks it trivial and decadent or sublime and mystical (though these attitudes and beliefs would be important influences on how or whether one acquired such knowledge in the first place, and on how one might be inclined to use it).

Some of the influences of affect and evaluation on teaching are well documented: much of the literature on teacher expectations, for example, concerns the impact of teachers' sometimes unrecognized feelings about students on the ways they treat these students. A less obvious arena in which affect is important is that of teachers' conceptions of subject matter. As the case studies in the third chapter will reveal, teachers often have well formed opinions of the value of different components of their course content--and these attitudes influence how they teach the content. For some of the history teachers in the sample, the content was ridden with trivia and as a result they saw their main role as that of teaching general learning skills rather than content knowledge. For Ms. Richards, one of the English teachers, spelling was of dubious value--so she tried to use the spelling unit as a vehicle both to cover the required material in the spelling text as well as to teach the students "responsibility" for getting work done (while at the same time giving them some padding for their grades). Finally, to use yet another example, Mr. Ralston, one of the math teachers, saw the fundamental problem of teaching math in the abstractness of the subject. He felt that the students would be more willing to learn the material if they could see that it had some "practical" value--and he organized his coursework in terms of this assumption. Affect and evaluation are thus important regulators of the amount of energy teachers will put into activities and how they will expend energy on an activity.

Episodic Storage. Abelson (1979) suggests that information in knowledge systems is stored primarily in associative networks of abstract semantic knowledge. Belief systems, by contrast:

> are likely to include a substantial amount of episodic material from either personal experience or (for cultural belief systems) from folklore or (for political doctrines) from propaganda. (pp. 358-359)

The distinction between "semantic" and "episodic" knowledge structures is not completely agreed upon in the psychological literature (see Schank, 1982; Tulving, 1983). Broadly speaking, semantically stored knowledge is thought to be broken down or "decomposed" into its logical consitituents (principles, propositional structures, or whatever) and organized in terms of semantic lists or networks. Episodic memory, by contrast, "is organized around personal experiences or episodes rather than around abstract semantic categories" (Schank & Abelson, 1977, p. 17).

As Abelson acknowledges, it is difficult to use this distinction to distinguish "belief systems" from "knowledge systems." Various theorists (including Abelson himself, see Schank, 1982; Schank & Abelson, 1977) have developed models of knowledge systems which depend heavily on episodic material. Instead, what Abelson seems to mean with his distinction is that beliefs often derive their subjective power, authority, and legitimacy from particular episodes or events (see Ayeroff & Abelson, 1976; Nisbett, Bordiga, Crandall, & Reed, 1976; Tversky & Kahneman, 1973). These critical episodes then continue to color or frame how one comprehends events at later points in time.

This is an issue which cannot be directly addressed in the present study (due to the lack of time depth), but there were clear indications that such critical episodes played important roles in teachers' practices. Ms. Skylark's already mentioned vision of an alternative classroom based on friendship and fun, for example, was derived as a contrast to her own (very

vividly remembered) experiences as a student. For Mr. Ralston, a math teacher, his experiences as a teacher in a Job Corps program seemed to have influenced his attitude that math skills needed to be presented in a "practical" vein. More generally, a number of teachers suggested that critical episodes or experiences gained earlier in their teaching careers were important to their present practices.

It can be noted that such critical episodes are probably at the root of the oft-noted fact that teachers learn a lot about teaching through their experiences as students--experiences which have been misleadingly referred to as "apprenticeships" to teaching (Lortie, 1975), or as periods of "participant observation" (Eddy, 1969) of teaching practices. In fact, however, being a student rarely entails the kind of systematic study of teaching that such terms suggest. Instead, what is much more likely to happen is that some crucial experience or some particularly influential teacher produces a richly detailed episodic memory which may serve the student both as an inspiration and as a template for their own teaching practices (as for Ms. Marsh and Ms. Cargill, both of whom modelled their teaching in some way on particular teachers who had had a great impact on them).

As discussed later, epidosic memory structures of this type may be highly adaptive for dealing with processes in ill-structured domains or uncertain and complex domains (Newell, 1969; Simon, 1973).

Nonconsensuality. Unlike the four characteristics described above, nonconsensuality is a feature of belief systems rather than of individual beliefs. Indeed, nonconsensuality is basically a consequence of many of the features described above. Simply put, "nonconsensuality" refers to the fact that belief systems consist of propositions, concepts, arguments, or whatever

that are recognized--by those who hold them or by outsiders--as being in dispute or as being in principle disputable.

One might well ask how a situation of "nonconsensuality" differs from a situation in which people simply differ in the amount or quality of their "knowledge" about some event or process. One way to answer this is to suggest that beliefs are less malleable or dynamic than knowledge systems. "Knowledge" accumulates and changes according to relatively well established methods of evidence and argument (but cf. the qualifications offered by Feyerabend, 1978; and Kuhn, 1970). Beliefs, by contrast, are relatively static (at least in terms of their core applications, see the discussion of "boundedness" below). When beliefs change, it is more likely to be a matter of a "conversion" or gestalt shift rather than the result of argumentation or a marshalling of evidence. One can say, then, that part of the "consensus" characterizing knowledge systems is a consensus about the ways in which knowledge can be evaluated or judged. By contrast, much of the non-consensuality of beliefs derives from the fact that there is a lack of agreement over how they are to be evaluated. As already suggested, belief systems often entail assumptions about the existence of entities and alternative worlds, affective feelings and evaluations, and personal experiences which are simply not open to outside evaluation or critical examination in the same sense that the components of "knowledge" systems are.

Unboundedness. Belief systems can be described as loosely bounded systems with highly variable and uncertain linkages to events, situations, and knowledge systems (Abelson, 1979, pp. 359-360). In other words, there are no clear logical rules for determining the relevance of beliefs to real-world events and situations. Moreover, these linkages and definitions of relevance may well be bound up with the personal, episodic, and emotional experiences of the believer. One way of looking at this feature of belief systems (drawing

on Stegmüller, 1976) is to say that beliefs have stable "core" applications (a domain of events and situations to which they are consistently held to be applicable--these could be derived from the "critical episodes" mentioned above in the discussion of the episodic underpinnings of beliefs) but that they can be extended in radical and unpredictable fashions to apply to very different types of phenomena. Knowledge systems, by contrast, generally have relatively well-defined domains of application, and can be expanded to encompass other phenomena only through the application of strict rules of argument.

What the concept of "unboundedness" means, then, in plainer language, is that people read belief-based meanings into situations where other people wouldn't see the relevance of the beliefs. The religious zealot who sees biblical significance in everything around him is a useful stereotype illustrating an extreme manifestation of this aspect of belief systems. More common examples can easily be found in the form of teachers who interpret almost all phases of classroom interaction in terms of a small set of assumptions or premises, or researchers who try to encapsulate the world in a single theoretical system.

The Functions of Beliefs

The preceding discussion leaves several issues unaddressed. Most importantly, nothing has been said about the functions of beliefs and belief systems in everyday cognition. These functions can be summarized into three areas: a) task definition and cognitive strategy selection; b) facilitation of retrieval and reconstruction in memory processes; and c) dealing with ill-structured problems. Each of these areas is examined briefly below. As in the case of the structural features already discussed, these functions are not

necessary and sufficient markers of belief systems, but instead represent prototypical characteristics of beliefs.

Task definition. Nonconsensuality, existence beliefs, and beliefs in "alternative worlds" make belief systems very important determinants of how individuals organize the world into task environments and define tasks and problems. However, the relationships between cognition and task definition and performance are highly complex. On the one hand, the nature of a task may be said to determine or specify the kinds of processing strategies to be used in accomplishing it. On the other hand the "task" itself must first be defined: An individual must perform some prior processing upon the abstract, virtual "task environment" (the potential task system as it would be viewed by an omniscient observer) in order to produce a concrete, actual task or "problem space" (Beaugrande, 1980; Simon, 1978). The significance of this latter point has often been overlooked in intra-cultural psychological research, as task definitions are tacitly assumed to be consensual. Thus, importance of task definitions has been most strikingly apparent in cross-cultural psychology. Consider the following protocol, taken from a study conducted in Liberia, in which the experimenter is attempting to assess the verbal reasoning skills of a Kpelle subject (Cole, Gay, Glick & Sharp, 1971):

> Experimenter: Flumo and Yakpalo always drink cane juice (rum) together. Flumo is drinking cane juice. Is Yakpalo drinking cane juice?
>
> Subject: Flumo and Yakpalo drink cane juice together, but the time Flumo was drinking the first one Yakpalo was not there on that day.
>
> Experimenter: But I told you that Flumo and Yakpalo always drink can juice together. One day Flumo was drinking cane juice. Was Yakpalo drinking cane juice that day?
>
> Subject: The day Flumo was drinking the cane juice Yakpalo was not there on that day.
>
> Experimenter: What is the reason?
>
> Subject: The reason is that Yakpalo went to his farm on that day and Flumo remained in town that day. (pp. 187-188)

As Cole and his colleagues argue (and show experimentally), these sorts of responses (which were very common among the Kpelle and other non-schooled groups, see e.g., Luria, 1976) are not evidence that the people in question cannot reason verbally. Rather, they represent "a refusal to remain within the boundaries of the problem presented by the experimenter" (Cole & Scribner, 1974, p. 168). As Neisser (1976) puts it, commenting on the dialog quoted above:

> The respondents do not accept a ground rule that is virtually automatic with us: "Base your answer on the terms defined by the questioner." People who go to school (in Kpelleland or elsewhere) learn to work within the fixed limitations of this ground rule, because of the peculiar nature of school experience. (p. 136)

In other words, the Kpelle subjects created a problem space (or actual task) radically at odds with the experimenter's conception of the task environment. Following Schoenfeld (1983), this process of task definition will be considered a function of the the "belief systems" of the subjects (and, naturally, the experimenters' definitions of the tasks should also be considered products of their belief systems). From this perspective, then, beliefs may be said to perform the function of "framing" (Tannen, 1979) or defining the task at hand. Implicit in this argument is a view of cognitive processing as entailing several qualitatively different levels or categories of thought (Schoenfeld, 1983).

First, a microscopic level of "internal processing" can be identified. This is the level consisting of the largely automatized and procedural processes of perception which take place without conscious attention. These "nuts and bolts" of cognition, consisting of representational structures, processing characteristics, and memory mechanisms (see discussions by Beaugrande, 1981; Monsell, 1981) are beyond the scope of the present study.

Schoenfeld (1983) labels the second level of thought "resources," and defines resources as the "knowledge possessed by the individual, that can be brought to bear on the problem at hand" (p. 331). Included within this category would be domain-specific knowledge, facts, algorithms, local (problem-specific) heuristics and the like. These constitute the tools or tactical resources of thought. However, as Schoenfeld (1983, pp. 332-333) argues, there are at least two distinct issues relevant to this category of thought: one is possession of knowledge and the other is access to that knowledge. One may possess the knowledge necessary to solve a problem, but not recognize the relevance of the knowledge or not know how to apply it to the problem in question.

This observation leads to the conceptualization of a third category of thought, the level of "control" or "metacognition." This category refers to thought about thought, or the conscious awareness and use of cognitive "resources" in the attainment of some set of goals (such as the solution of a problem) (see Brown, 1980). As Flavell (1976) puts it:

> Metacognition refers, among other things, to the active monitoring and consequent regulation and orchestration of these [cognitive] processes in relation to the cognitive objects or data on which they bear, usually in the service of some concrete goal or objective. (p. 232)

If the category of cognitive resources described earlier can be thought of as the level of "tactics," the category of "control" processes now under examination can be thought of as the level of "strategy." It refers to the deliberate, conscious control and coordination of resource use in problem solving. An example from Schoenfeld (1983) may be useful here:

> Two students are asked to determine the characteristics of the largest triangle that can be inscribed in a given circle. They guess that the equilateral triangle is the solution, and set out to calculate its area. The calculations get rather messy, and they are still calculating when the 20 minute videotape runs out. When they are asked what good having the area of the equilateral triangle will do them, they cannot say. Yet their entire solution was determined by their decision to undertake the computation.

> This is an extreme (although not atypical) example of what might be called an executive or control malfunction: one bad decision, unmonitored and unchecked, dooms an entire solution to failure. What the students actually knew, and what they might have done if given the opportunity to use that knowledge, becomes a moot question. So long as they pursued that computation, whatever else they knew was useless to them. In contrast, [consider] a protocol taken from a mathematician working on an unfamiliar problem in geometry. He generates at least a dozen potential "wild goose chases," but rejects all of them after brief consideration. With some clumsiness, he solves a problem the students did not--although he began working on the problem with much less domain-specific knowledge than the students "objectively" had at their disposal. It can be argued that the expert's success and the students' failure were due, respectively, to the presence and absence of productive "metacognitive" behaviors. (pp. 333-334)

"Control" or metacognitive thinking has to do, then, with the way in which an individual selects from among his or her repertoire of possible or potential tools of thought to solve a certain type of problem. But how does a person know what <u>type</u> of problem they're dealing with? This is the point at which "belief systems"--a fourth category of thought--become important determinants of task or problem definition. To make this point clearer, let us consider an alternative and potentially confusing notion of "task definition."

It has been shown that people who are "experts" in a given domain of activity "see" problems or task environments differently than do novices (Chi, Glaser, & Rees, 1981). This sort of task "definition" differs from the type we are concerned with here. Expert/novice differences in task definition refer to the ways in which individuals with different "resources" or domain-specific bodies of knowledge interpret surface configurations of components in a well-defined problem space. Experts, so to speak, perceive basic "deep structures" underlying a vast range of possible "surface structures." But the key here is that these individuals--whether experts or novices--are dealing with an already defined task environment. It is, for example, a question of relative skill or knowledge in a known domain such as the game of chess,

rather than a question of trying to define what kind of game is being played, why one is playing it, or what kinds of consequences might stem from winning or losing. These latter types of issues are those with which belief systems are concerned.

One can thus think of cognitive resources, metacognitive control strategies, and belief systems as progressively more encompassing systems of thought. Task environments are first defined in terms of belief systems. Metacognitive strategies are then employed to select among the available cognitive resources to carry out the task (this is, of course, a simplification: there will almost certainly be some feedback and interaction among the various levels of thought). The importance of this point for understanding teaching and teacher education has already been suggested: to understand what teaching is, from the teachers' perspective, we have to understand the beliefs with which they define the tasks of teaching. Some, like Mr. Larson, one of the history teachers in the sample, define teaching simply as a job, a form of labor, a way of making a living. Ms. Marsh, another history teacher, sees teaching as a moral mission, a way of socializing children. Money for her is secondary. "Teaching," in short, takes on completely different meanings, becomes an entirely different task, for these two teachers. The failure to recognize this might very well vitiate any attempt to make sense of what these teachers do in the classroom and why they do it. It would clearly be difficult or impossible to train these teachers--or two prospective teachers with similar orientations--with the same methods and expect similar results or any results at all.

Facilitation of memory processes. Beliefs, as suggested earlier, frequently involve moods, feelings, emotions, and subjective evaluations. These features make beliefs quite important in memory processes. The issue here is not state-dependent recall (the idea that recall of information will

be best when the subject's mood at the time of retrieval matches the mood in which the information was originally learned--that, for example, if you learn something when angry, you will recall it best when angry, see e.g., Bower, 1981). Instead, the aspects of mood and emotion of relevance here are the facts that they seem to be stored in some durable fashion in long-term memory, that they take the form of gestalts which can be highly chunked for efficient representation and retrieval, and the fact that mood and emotion seem to require very little in the way of allocated processing capacity (Spiro, 1982a). Spiro (1982a), for example, suggests that

> representation of text and real events has two aspects: propositional representation of content in the context of relevant preexisting knowledge schemata and analog representation of collateral experiental states. ... [An] accurate notion can be gotten by thinking of all content representation as having a background coloration. The nature of the coloration corresponds to the nature of the felt experience. When an event has a continuous dominant experiential quality, as events often do ... the representation of the event will have a relatively homogeneous background coloration. When such homogeneity prevails, I refer to the event as having a signature feeling. (p.31)

Spiro suggests that this coloration serves at least three purposes. First, it facilitates recall: background coloration, figuratively speaking, is more visible from greater distances than is specific content:

> Information in retrieval contexts first leads to memory files that contain information about signature feelings. That information is then used for a preliminary scan of the more detailed representations, but at a "distance" that allows detection of coloration but not content specifics. When a coloration match is found the memory area with that coloration is then "magnified" allowing retrieval of specific memorial information. (p. 31)

The second function of emotional or attitudinal coloration has to do with the "cohesion" of elements in memory. To the extent that content experiences correspond closely to homogeneous emotional, evaluative, or attitudinal qualities, "the coloration will act as a kind of cohesive glue to inhibit disintegration of memories over time" (Spiro, 1982a, pp. 31-32).

Finally, experiential coloration performs an important function in constructive and reconstructive memory processes (Spiro, 1977; Loftus, 1979). Memory entails more than the simple abstraction and storage of unaltered and unedited memory traces. Instead, the representations of events in memory are partial constructions of events based on an incomplete sampling of the potentially available information. These incomplete representations are then typically fleshed-out or "reconstructed" during recall. Spiro (1982a) argues that:

> The signature feeling constrains this process by acting as a check on generated candidate memories. Information that may logically and pragmatically fit with the rest of an event can be discounted if it would seriously distort the stable signature feeling. (p.32)

In summary, then, the affective and emotional components of beliefs may influence the internal cohesion of events and elements in memory, may influence how memories are indexed and retrieved, and finally may influence how they are reconstructed during recall. In short, these components may have important implications for how teachers learn and use what they learn.

Dealing with ill-structured problems and entangled domains. The so-called "episodic" nature of beliefs and the "unboundedness" of belief systems are closely linked to the function of beliefs in enabling people to deal with "ill-structured problems" and "entangled domains." The terms in quotations may require some explanation.

As Simon (1978, p. 286) suggests, there is no precise boundary separating well-structured and ill-structured problems. Instead, problems may be seen as fitting into a continuum as they vary along the following dimensions:

1. The problems differ according to the clarity or ambiguity of their formal goals. Is the nature of what is being sought in the problem precisely defined? Is there a single goal or a set of related goals, or are there a

variety of inconsistent or unrelated goals? Are there criteria available for determining whether and when a goal has been attained?

2. How well defined is the "technology" or set of procedures for attaining the goal(s)? In other words, how well can actions be linked to consequences? Can a set of actions be defined that will invariably lead to desired consequences (or can a probability be assigned to the likelihood of the goal be attained through a given course of action)? Can one even determine in retrospect what course of actions led to an observed outcome? Can actions and consequences be linked in correlational or causal ways?

3. Ill-structured problems are problems which require people to use background knowledge or make guesses or assumptions in order to solve the problem. As Simon (1978) puts it:

> "The information needed to solve the problem is not entirely contained in the problem instructions, and indeed, the boundaries of the relevant information are themselves very vague." (p. 286)

4. Finally, in ill-structured problems, alternative courses of action at different points of the problem-solving process are not clearly defined: "There is no simple 'legal move generator' for finding all of the alternative possibilities at each step" (Simon, 1978, p. 286). Not only is the problem solver uncertain of what should be done, he or she is uncertain of what can be done.

The concept of an "entangled domain" has to do with instances or examples or entities which can be identified by some criteria as belonging to a given domain, but which at the same time do not all share some important sets of criteria and do not fall into relationships of dominance and subsumption with each other. As Spiro and Myers (1984) put it:

> Some knowledge domains are better structured than others. . . . The well-structured domains . . . often exhibit neat hierarchical organization, examples are well tied to classes, and the features that permit classification are clear and unambiguous. Further, instances of these

> domains exhibit these clear relationships, thus permitting easy recognition . . . and comparison across instances . . .
>
> On the other hand, it is often the case (some, e.g., Wittgenstein, 1953, would say that it is usually the case) that domains (and texts and tasks) are ill structured or ill-defined. Across occasions of a domain's use (or across parts of a given text that reflect the structure of such domains), there is at best a partial and irregular overlap of thematic features of the domain and of the ways relevant features relate to each other on each occasion (or across parts of text). (pp. 492-493)

Spiro (1984; Spiro & Myers, 1984) suggests that when people encounter entangled domains and ill-structured problems, many standard cognitive processing strategies--for example, schema abstraction or analytical reduction--are no longer viable. Instead, because one would never be sure just what information would be needed to deal in an adaptive manner with such domains, one would need to encode as much information as possible in as many ways as possible. Such knowledge would take the form of rich, contextualized, highly multivariate, descriptions of large numbers of individual cases--knowledge that could be examined and reexamined from many different perspectives (Spiro, 1984). The episodic cores of belief systems would seem to be good potential candidates for these types of knowledge structures. That is, the critical episodes which, according to Abelson (1979), form the infrastructure of many belief systems, would take the form of the "cases" arising from attempts to deal with ill-structured problems and entangled domains. Because belief systems are "unbounded," these cases can be mapped onto a vast range of new events or experiences.

What these speculations suggest is that belief systems seem to have certain characteristics--a heavily episodic character merged with an unboundedness--which make them particularly useful for dealing with ill-structured problems and entangled domains--the very kinds of domains and problems that one might expect to find predominating in school settings. This is a point which should become clearer in the case studies of Chapter Three,

which show how the teachers in the study made sense of teaching different content in different contexts over the course of their careers.

First, however, to provide some needed background for the study, and at the same time to examine the issue of the connections between teachers' beliefs and the contexts in which they work, Chapter Two describes the three schools which served as the sites of the study.

CHAPTER TWO:
SCHOOLS AND SETTINGS

Introduction

This chapter describes the three schools which served as sites of the TBS research. Although the descriptions are brief, schematic, and in many respects incomplete, the reader may wonder why they are necessary at all: why look at the settings in which teachers work if the main interest is in their belief systems and classroom activities? The answer to this is that "beliefs"--indeed, most forms of thought--are formed and exist to deal with particular types of settings. They are context- or setting-specific. This is not to say that contexts determine or completely shape beliefs and thought processes. Rather, the argument is that settings and thought processes must be viewed as functionally related components of systems of activity. An analogy may help to make this point.

Suppose we were interested in studying the "killing abilities" (or "killing effectiveness") of hunters (the example is borrowed from Cole & Griffin, 1980, who use it for a slightly different purpose). Suppose further that we studied two groups of hunters, one group using bows and arrows, the other group using rifles. We might, using a criterion such as "number of deer killed per month," determine that hunters using rifles were more effective killers than bow and arrow hunters. But where does this "killing ability" reside? Do the hunters with rifles have more "killing ability" than the hunters with bows and arrows? Or should we say simply that rifles are better implements of killing than bows and arrows? As Cole and Griffin (1980) argue, neither answer would be quite correct:

> we must be loath to say that the use of bows and arrows or rifles led to any general difference in the "killing ability" of the individuals using these tools when the tools were not in their hands. The changes in "killing ability" reside jointly in the tool and the user. (p. 357)

In other words, killing ability (or teaching ability -- or any kind of ability) is not reducible to mere knowledge, expertise, or decision making skill. An individual's ability to perform some task is a product--not of the individual's capabilities alone--but of an interaction of individual capabilities and resources and tools either brought to the task or contained within the task environment. One implication of this is that it is essential, when studying "thinking" in naturally occurring tasks and activities, to study not only the thinker, but to develop a model of the task environment in which the individual works and to describe the resources or tools available to the user for accomplishing tasks within that environment. The issue is clearly complex, and the present chapter is concerned with carrying out only one part of this charge: that of describing the very general level of the task environment of teaching constituted by the school as a work-place and as an organization in the context of a community and school district. The nature of the dialectical processes through which instruction is shaped by both objective characteristics of school settings and by teachers' beliefs and cognitive strategies is examined in more detail in another paper from this study (Nespor, 1984b).

There is, however, no existing system for classifying or categorizing schools. It is therefore necessary simply to describe the schools in terms of a number of dimensions identified as salient or important by the teachers, though naturally different teachers in different schools construed the dimensions in various ways and placed different emphases on them. Countryside school is described first, then Cityside, and finally Middleburg. At the end of the chapter some of the patterns of variation across these schools will be examined and the possible implications of the contextual variation for teachers' belief systems and practices will be explored.

The Setting of the School

Countryside was the sole junior high (grades 6-8) in a rural school district serving approximately 2,500 students in grades 1-12. Countryside itself had an enrollment of about 700, approximately 67% of whom were Anglo, while 18% were Black, and 15% were Mexican-American--percentages essentially the same as those of the county as a whole. Countryside was located in the town of Dewey (population approximately 3,800), about 45 minutes by car away from Morton, a large urban center in another county (the site of Cityside school, described later in this chapter).

The close proximity of the large city had important implications for life in Dewey. For example, Dewey depended on Morton for much of its economy. There was little business or industry in the area, and (according to a state industrial commission survey) of the 9 employers in the town who engaged 10 or more workers five--accounting for about 85% of the workers employed in the town--were public agencies at the federal, state or local level (the school district was the largest single employer).

As a result of the economic underdevelopment of the area, the community served by the school district was rather poor. According to Census figures almost 18% of the people in the county had incomes below the poverty level--with the figures being much higher for Blacks (37%) and Mexican-Americans (32%) than for Anglos (11%). Educational attainment in the county was also relatively low: only 49% of the population over 25 had graduated from high school. Median family income in the county was around $12,500, but few individuals made salaries in that range from jobs located within the county. Thus, an administrator at Countryside, while noting that he made $7,000 to

$8,000 less than he would have made in a comparable position in Morton, pointed out that in Dewey:

> The school administrator's probably right up there with the higher-paid people in the community. For example, my secretary makes $12,000 a year. There isn't a secretary in Dewey that makes $12,000 a year besides those in the school. They're gonna make $7,000 a year. So the school people are considered very highly-paid people by the whole community.

In addition to the general lack of wealth in the area, the school board members in the Countryside district were also fiscally conservative. As one school administrator remarked, "We're the lowest tax district anywhere around . . . you know, these conservative farming communities, they're just not willing to raise those taxes in order to pay teachers." These circumstances, and the resulting resource constraints and low pay scales, had a number of ramifications for the quality of instruction at Countryside.

The School

Physical plant: lack of available space. Both teachers and administrators complained of the crowded condition of the school. The school building, a one story edifice in the middle of town, was only 5 years old, but it had been designed on the assumption of a stable student population. Instead, in the 5 years the junior high population had grown from just under 500 to slightly over 700. As a result, classes were crowded and all of the classrooms in the school were in use every period of the day. The following comment typifies the attitude of several teachers:

> It irritates me that I have to have so many kids. But yet I know that the district can't seem to afford it any other way. They don't have a bigger building. They don't have any more space.

The school was extremely noisy and the rooms almost suffocating when the ventilation system failed (as it did with regularity). Moreover, because classrooms were in use each period, the teachers had no private area to use

during their planning periods and were forced to use the small and generally crowded teachers' lounge.

Overcrowding and ability grouping. Several aspects of Countryside's organization appear to have been developed to deal with the overcrowding. For example, the school day at Countryside was divided into seven periods (as opposed to six periods at the other schools studied) in order to reduce the number of students per class (although this meant class periods which were shorter by 10 minutes than those at other schools). At the same time, however, other administrative decisions--made in the context of the paucity of financial resources--seemed to exacerbate the school's overcrowding.

For example, the sheer number of students each teacher had to deal with was greatly increased by the principal's desire to keep his level of staffing at a minimum: "I'm a firm believer [that] as long as you can keep everybody with one teacher, that's when you get a true picture of what's going on." The year in which the TBS research was carried out was the first in which there had been more than one teacher per subject matter area per grade level. Thus, the previous year, each seventh-grade teacher had had between 210 and 220 students to deal with over six periods. Apparently at this point some threshold was reached and the principal used the growth of the school as a rationale for reducing class loads through a form of ability grouping. As the principal explained:

> For the first time we have been able--due to increased growth-- to pick up another unit [i.e., have a second teacher for a course at a grade level] and where I choose to put the unit is to take care of these lower-level kids . . . we tried to do a little better job of the grouping at the same time, and not have a room full of minority kids.

In other words, there was now usually one "overflow" class per subject matter area at each grade level. These were supposedly "remedial" classes

(the need for remediation to be determined on the basis of teacher recommendations and test scores). However, because of scheduling constraints and other reasons (parental pressure, for example, was said to be effective in keeping children out of the remedial section), not all students "below grade level" were in the remedial classes. In fact, all of the classes studied had students ranging from the third-grade to the 10th-grade level according to their standardized tests scores. Thus the creation of the remedial classes reduced the number of students the teachers had to deal with (to somewhere around 170-180 students) but did little to alter the heterogeneous grouping in the classrooms.

Materials. Teaching materials were in short supply at Countryside. One teacher recounted that the school had run out of paper during testing time the previous year. As a result:

> We're constantly being told we're out of paper: "Don't make so many run-offs, don't make so many dittos because we're out of paper. Use more chalk-board things." You know, that can sometimes be a problem. In history sometimes you have to have run-offs . . . I don't do as many maps as possible, and I don't do as many puzzles sometimes. We skip maps, and hence I don't feel they've got the map skills they need.

At the time of the TBS study, teachers at Countryside received a yearly stipend of $40 for all of their materials, supplementary texts and so forth.

> Interviewer: What if you want to buy something for your class and you need more than $40?
>
> Ms. Skylark [8th grade English teacher]: I wanted to. I wanted to buy not just 20 copies of Where the Red Fern Grows, I wanted to buy 30. But I couldn't. He [the principal] said, "Don't even ask, because you won't get it. You ask for exactly $40, because that's all you're going to get." And I wanted workbooks. I get tired of running off mimeograph sheets all of the time. They need a workbook where they can practice doing this stuff. And, he said, "Don't ask for workbooks this year. [The superintendent] is not going to give anybody workbooks this year. He doesn't want to buy workbooks." I don't understand that.

Assistance from the office. Teachers' at Countryside were generally on their own and could expect little direct help from the administrative staff.

The year TBS fieldwork was conducted at Countryside was the first in which the school had had a fulltime counselor. The previous year the counselor had been available on a halftime basis; before that, the school had had no counselor.

There was supposedly a roving counselor in charge of evaluating potential special education students for the entire county, but the teachers interviewed said that the paperwork necessary to refer a student for evaluation was prohibitively extensive, and that little action could be expected even if the paperwork was completed.

There was, of course, a vice-principal at the school, his primary duties being to assign lockers, distibute textbooks, and discipline students. Even in the case of punishing students, however, there was an expectation that teachers would settle their own affairs: it was assumed, for example, that individual teachers would administer corporal punishment to students (though a few sent their students to the vice principal to be paddled). Indeed, three of the four teachers interviewed at the school felt that discipline and punishment decisions should not be made from the central office. As one put it: "A teacher should be able to administer her own swats . . . I handle my own discipline." An outgrowth of this attitude was that, although there were school rules on such things as dress and behavior, these were enforced in very different ways by the different teachers.

Curriculum Development. School and district administrators had very little influence on what was taught in Countryside. There was no curriculum coordinator or supervisor in the district, and content and instructional style were largely left up to the individual teacher. As Ms. Skylark explained:

> [Content] is all determined by me at this point. I have never seen a written [guide] . . . I suppose if I went and asked for it, I could find it and see, you know, but no one has every brought it to me and showed me and said, "This is what you're supposed to be

> teaching." They've given me the [textbooks] and they've said, "This is what you're supposed to be teaching from this book." So I teach all of that from these books.

The teachers interviewed for the present study felt that this situation placed them at a disadvantage. Mr. Ralston, who had worked in the more affluent Morton school district, compared his experiences at Countryside with those at Morton:

> This district's far behind because you don't have the resource people that you can go to to get additional help in social studies or math or any area. In Morton, almost in every subject matter, you got curriculum specialists that you could call to bring in to reinforce whatever you were doing . . . Those people would come in and help you out.

The teachers did have access, in theory, to a regional educational service center located in Morton, but some teachers found it difficult to use the center: "It's very inconvenient. By the time I get out of school and by the time I would get there, it would be closed." The main use of the service center seemed to have been by teachers ordering films. Although it was possible for the school to request that someone from the service center come to Countryside and present a workshop on a particular issue, the school's experience with such workshops had not been good:

> My complaint about the service center is that they don't always send a specialist. He thinks he's a specialist or she does, maybe. Or maybe they just got a request and said, "Well, Sally Jane, they need somebody in Dewey so go down and put 'em on a workshop."

Even if teachers attempted to introduce innovative teaching practices, they could not count on any administrative support. A high rate of teacher turnover seemed to have inspired or reinforced a curricular conservatism among School Board members. One teacher suggested that the Board was reluctant to buy new materials (e.g., textbooks, workbooks, etc.), introduce new programs or attempt any other sorts of innovations because of uncertainty about the

identity of the school personnel who would be around to implement the new designs. Apparently, at some time in the past, energetic teachers had convinced the Board to invest in new programs and had then left the school before the innovations were in place:

> It's very hard for a new teacher to come in here with all these innovative ideas . . . you get all these ideas and look, next year [the teacher's] gone. Well, when you do the board like that one or two times . . . they get a little leery of anybody else that comes in with a lot of new ideas.

As these comments suggest, the economic constraints under which Countryside operated led to a situation in which few resources or amenities were provided to the teachers. As the next section shows, the economic context of the school also influenced the types of teachers it could attract.

The Teachers

Pay. Beginning teachers at Countryside received what was, at the time of the study, the base level salary set by state law (around $11,000). After a year in the district teachers could receive a raise to 2% above the state base, but the highest pay any teacher could receive was 4% above the base. This was, as one teacher put it, "chicken feed." "If I was to divorce my husband today," another added, "I could never make it on my salary alone, I couldn't do it." According to Ms. Marsh, an eighth grade Social Studies teacher:

> People that have stayed here and are staying here are in teaching as a hobby, because it doesn't pay enough to be a profession. So they're in it because they love what they're doing, they enjoy what they're doing. But they're not in it to really make a living.

Opportunity for collegial development. Apparently, many of the teachers at Countryside were not in teaching as a "hobby." Teacher turnover was endemic at the school. According to one teacher, "We start off with almost a

brand new staff every year. In the seventh grade last year, we only had one returning teacher." The major reason behind this turnover rate was the competition from the nearby (and much better paying) Morton school district. A school administrator explained:

> You have a very big turnover with teachers on a regular basis, because if they can get into the Morton system, they're gonna make more money, and some of them are already traveling from Morton. So they cut out their travel expenses, plus they make more money.

In short, the city of Morton was able to operate by hiring a minimum number of beginning teachers and instead drawing good, experienced teachers from the surrounding rural districts. Schools such as Countryside, by contrast, were forced to employ many new, inexperienced teachers. As the Countryside principal explained:

> We train 'em and Morton hires 'em . . . Morton does not have to hire unexperienced teachers. But just as soon as we get one in here that is top-notch, Morton finds it out, then they hire 'em away from us, 'cause they're no longer that beginning teacher. They're an experienced person that has done an outstanding job in Dewey or [he names several other small communities near Morton] . . . it probably slows down your . . . improving of education . . . Occasionally in a town this size--it's getting better--but you have to hire when August the 20th come, you have to hire just somebody and we've done that to have a body in there, because they will not let you have funding to hire a substitute teacher. I've got some substitute teachers that do not have college that's better teachers than some people that are certified, but you can't get funding for that.

Other teachers echoed the view that most of the good teachers were quickly hired away by larger, better-paying school districts. One teacher complained that:

> We seem to hire . . . the first person that comes along and says "I am qualified," we seem to take them. We're not choosey and it's because we cannot afford to be choosey . . . we don't pay enough to be choosey. . . . But if we got a good person, they're usually gone within two years because they get paid more some place else . . . we lose a lot of good people that way.

The teacher pay issue thus seems to have been a component in a vicious circle: The low pay and scarce resources drove the better teachers away from Countryside, while, as described earlier, the lack of a stable and cohesive faculty made the School Board reluctant to raise salaries or experiment with innovations.

This situation also clearly worked against the formation of any sort of collegial ties. In the first place, a large proportion of the teachers were beginners, primarily concerned with survival. Secondly, most of the teachers (at least among those who did not own homes in the community) aspired to leave Countryside and get jobs in better paying districts. Third, most of the teachers apparently succeeded in getting other jobs after short stays at Countryside: There was very little stability among the faculty. If these features of the situation are layered onto the facts that the faculty was small in absolute terms, and that there was only one full time teacher per subject matter area per grade level (making organization around curricular concerns difficult) it is clear that teachers had little incentive or opportunity to meet, talk, form friendships, discuss school policy, formulate plans or develop curriculum. The teachers were, in essence, isolated from one another.

Teacher assessment and evaluation. If there was little communication among teachers, there was even less among teachers and administrators. Once hired, the evaluation of teachers at Countryside school seemed to follow no set procedure, as the following extract from an interview suggests:

> Interviewer: How are you evaluated? Is there a standard procedure?
>
> I don't know. I don't know what that is. I'm wondering myself. He [the principal] has been evaluating the first- and second-year teachers and he sits around the classroom and he evaluates them and then tells them how they're doing and what they need to work on. And last year he went over the evaluation with me and I read it and he said, "Just sign here." And I kind of think that what he's

> going to do this year is--after 3 1/2 years he feels he knows me well enough that he doesn't really need to give me a fresh evaluation.

Other teachers acknowledged that first- and second-year teachers were the most scrutinized--they were usually observed twice a year--while teachers who had been at the school over 2 years--especially those on 2-year contracts, might be observed only in those years when their contracts came up for renewal. The way the evaluation was conducted seemed to differ for different teachers. One teacher claimed that the principal would walk in unannounced to observe, but several other teachers suggested that the main form of evaluation was for the principal to stand outside the door and listen to the noise level in the classroom. As the principal himself explained:

> I found that I can observe a teacher from the hallway and get a better picture of what they're really like than I can if I'm sitting in the classroom, and the reason for my philosophy is this: If I walk in on a teacher unannounced and sit down, they have this feeling that I'm spying and they're gonna be nervous. If I tell the teacher in advance I'm going to come then they get overly prepared so they do an excellent job, more than normal.

School-community Relations

There was relatively little social or organizational distance between the school and the community it served. The superintendent of schools visited Countryside with some frequency and took a direct role in hiring faculty. School Board members were closely linked to school faculty through family, church, and social ties. School Board members had even visited the school to talk to students about school policies (e.g., about the school dress code). Teachers living in the town said that they frequently ran into their students (for example, at the main supermarket). There was little organized parent interaction with the school--the PTA played a small role in the school and few parents attended the school open house--but those teachers who lived in town had ongoing informal ties with the parents of their students.

School perceptions of and accomodations to the Community. With the general closeness of school and community, it was not surprising that school administrators and teachers (at least those few with roots in the community) took a general interest in the life of the community. For example, concern was voiced over the low educational aspirations that parents had for their children. As one teacher put it:

> The majority of them [the parents] just want them to get through high school. Now, we have about 40% that are seeing college as a definite goal, but I think that 60% of them are just hoping to get them through high school. And some of that 60% are just hoping to get them through junior high. I had a parent conference this week where the daddy said, "If he doesn't shape up in ninth grade, that's his last year." So he'll have an eighth-grade education.

One apparent product of this concern for motivating students and parents and raising their aspirations was a general reticence (among administrators, if not all teachers) to retain failing students. In theory, a student failing more than one of the five major subject matter areas (e.g., math, science, English, etc.) would be retained. In practice, however, a failing student could be passed to the next grade by the vote of a group of five teachers. In fact, even if all five teachers voted to retain a student, the student could be passed anyway at the option of the principal. In short, there was an elaborate system to provide for the social promotion of students.

Although social promotion is not uncommon in schools, it is worth pointing out that it was not used at Countryside merely as a means of getting rid of bad or unruly students. Instead, as already suggested, it seemed to have more to do with creating a positive image for the school and raising the expectations and aspirations of parents and students. Failing students from "difficult" family situations (e.g., having divorced parents was seen as a sign of trouble) were passed on, while students from "good," stable

situations might be retained. Obviously, this type of selection process was possible only in a context where there was little distance between school and community, and where the circumstances of a child's homelife were well known by teachers in general.

Forms of parental influence. Parents influenced the school more directly in a number of ways. First, they shaped the "climate" in which the school operated. Discipline policies are a good example of this point. Paddling, according to the principal, was "demanded" by the community:

> This is a community that says, "If our children do not behave we want them straightened out, whatever the price may be." . . . The community [believes] in corporal punishment."
>
> Even today you still have a situation that a parent will find out that the child got into trouble, that you spanked him, he hears the kid laughing about it and he may bring the kid back up and say, "I'm going to paddle him again 'cause you didn't paddle him enough for what he thinks it's funny." That still does take place some here. This is just an old-time community, the parents were raised that way and the grandparents were raised that way and I was raised that way.

Community support for strong discipline policies was exemplified in several ways. For example, although the school sometimes had little choice in hiring teachers, when it did have a pool of applicants to choose from, the main criterion for selection seemed to be the teacher's attitude towards "discipline." As one teacher explained:

> I know that when I was hired [about 5 years earlier], the main emphasis was can you handle class discipline--can you swat a child yourself . . . Discipline was the biggest push when I was hired on.
>
> Our principal is really strong on discipline. That's his number one stress, is always discipline. And I think that we get that shoved at us.

Again, when a member of the administrative staff of the school was sued for abuse after paddling a child (the suit was brought with the help of Legal Aid--an outside agency), the School Board backed the principal, paying legal fees and a settlement with the student's parents. As Mr. Larson, a teacher

discussed later and a frequent user of corporal punishment put it, the office and district really "back the teacher up":

> For example, they had a faculty meeting Wednesday this week, and one thing the superintendent brought up was you need to be a little tougher on discipline. When you hear that kind of thing, you know you got backing, you see. When you hear something like, "well you need to lighten up and be a little fairer with them," something along that line, you'd better figure things ain't too hot.

It should be noted, however, that not all teachers used corporal punishment, and one, who had been at the school some time, said paddling was used less than in the past--possibly because the turnover of faculty was bringing younger teachers from other regions of the country into the school.

At the heart of the climate of tough discipline was the idea that the school should have unquestioned authority to deal with children, that parents had no business interfering in school affairs. Indeed, so few parents visited the school or complained directly about teachers that it was a matter of great comment when one did so. Apparently, however, parents did make their feelings about particular teachers known if those teachers were considered to be very bad. As one teacher put it: "It's funny with bad teachers, but people get to know, through [their] kids. Parents [complain], kids [complain]. After so many complaints, the administrators start looking." The principal acknowledged this means of evaluation:

> Number one, I think that if the community's alert, if a teacher's not doing a good job, you will hear about it in the community. So, you need to keep your ears open for community gripes. Sometimes the gripes are legitimate, and many times they are not.

Thus, rather than directly intervening in school processes in an official manner, parents (but presumably only those who moved in the same social circles as the school administrators and resident teachers) could make their feelings, complaints, or suggestions known in a indirect, unthreatening, but effective fashion.

The Setting of the School

Cityside was 1 of 10 junior high schools (Grades 7 and 8) in Morton, a city of approximately 350,000 inhabitants, with about 55,000 students enrolled in Grades K-12. Cityside was the smallest of the junior highs in the city, with an enrollment of just over 500 students.

As a result of court-ordered busing to desegregate the Morton schools, Cityside served three geographically and socially distinct areas of the city. Table 2 shows census tract data on the three districts. The overlap between census tracts and catchment areas is not exact, but it is close enough to provide a realistic description of the students from the three areas. Two of the catchment areas are composed of three census tracts.

As Table 2 suggests, Area A is an affluent, predominantly Anglo neighborhood; Area B is a poor, predominantly Black neighborhood; and Area C is a middle-class Mexican-American neighborhood. The student body of Cityside is around 45% Anglo (most from Area A), 25% Black (most from Area B), and 28% Mexican-American (most from Area C). According to Census data, most residents in Area A are in managerial or professional occupations, while service and blue-collar craft occupations predominate in Area B. Sales, craft, and "machine operation, transportation and general laboring" are the main areas of employment in Area C. Cityside school is located in the heart of Area A and before desegregation served only that area of the city. Area B is about 10 miles away from the school and Area C is about 20 miles distant.

Although some of the students at Cityside came from the poorest areas of town, Morton itself was a rapidly growing and economically expanding sun-belt city, and the school district was resource-rich relative to the Countryside district.

Table 2

Characteristics of Areas Served by Cityside School

	ETHNCITY%			MEDIAN HOUSEHOLD	% GRADUATED H.S.
	Anglo	Black	Mex-Am.	INCOME	
TOTAL CITY	76%	12%	19%	$14,700	75%
AREA A					
TRACT 1	95%	.6%	3%	$26,700	96%
TRACT 2	92%	2%	4%	$16,000	94%
TRACT 3	96%	1%	2%	$45,800	96%
AREA B					
TRACT 1	21%	64%	14%	$ 9,600	56%
TRACT 2	5%	83%	12%	$ 7,800	42%
TRACT 3	.9%	87%	12%	$ 6,700	41%
AREA C	16%	19%	65%	$12,000	35%

Source: U.S. Bureau of the Census, 1980 Census

The School

Space. The affluence of the school district was manifested in the Cityside school building itself: a large, two-storied structure surrounding grass covered courtyards (the students were not allowed to walk on the grass). Though considerably older than the Countryside school, Cityside building was much better maintained and appeared newer.

While crowding had been a problem at Countryside, the classrooms at Cityside were somewhat larger and better ventilated (even when the air conditioning failed, the circulation of air was accomplished with fans sent by the school district--something unthinkable at Countryside). All of the teachers had their rooms to themselves (without students) for at least one period a day; and there was, in addition to this, a large and relatively comfortable teachers' lounge where teachers could congregate to talk during their planning periods or over lunch. The school even had unoccupied rooms available for special activities (e.g., a drama room in which Mr. Franklin could present historical plays that his social studies students had worked on--at Countryside similar activities were undertaken, but the social studies teacher Ms. Marsh had to reserve time in the library to put on her plays). At Countryside, by contrast, there were more teachers than there were classrooms, and room utilization was 100%.

The workload for teachers was also somewhat lighter at Cityside than at Countryside. While Countryside teachers had to teach 6 periods and approximately 170-180 students, Cityside teachers had to teach only 5 periods, 125-150 students. The Cityside teachers, moreover, had more time in each class period to treat individual students. Even though there were fewer students at Cityside than at Countryside (500 compared to 700), there were more teachers

at Cityside. Where Countryside had only one full-time teacher per subject matter area at a given grade level, Cityside, had two teachers.

Ability grouping, which had existed at Countryside only in the form of loosely defined "remedial" classes, was more in evidence at Cityside. There were 8 to 10 sections for each course, with 2 or 3 of these sections being "honors" classes (the honors sections, which were overwhelmingly Anglo, were determined by standardized test scores, although parental requests also had an impact in some cases). One teacher would teach all of the honors sections.

In previous years there had also been "remedial" classes (these had been populated primarily by students from ethnic minority groups) but this lower track had just been dropped when the TBS research began at Cityside. Instead of three tracks, the teachers now had regular (heterogeneous) sections in addition to the honors sections.

Materials. According to the teachers, there were no real difficulties in obtaining sufficient supplies or instructional materials. Slide projectors, overhead projectors and other forms of equipment which had been in very limited supply at Countryside were available to all the Cityside teachers. Paper, tape, and other materials were distributed through "departments." A department consists of all the teachers in a subject matter area. The social studies department at Cityside, for example, would be the two seventh grade social studies teachers and the two eighth grade social studies teachers. Each department was also given $400 in supplemental money to be used at the discretion of its members.

Assistance from the office. Teachers at Cityside could call upon a number of resource personnel for specialized assistance. Cityside had both general counselors and vocational counselors. With regard to matters such as discipline, the school administration took a much more active role in

regulating teachers' activities. Corporal punishment was not allowed (although it was at other schools in the district). Teachers could invoke such sanctions as keeping students after school, but only as long as they didn't cause the students to miss the last buses taking them home. In the main, teachers were expected to send students who habitually or severely misbehaved to the office: The referral process was well established, with the vice-principal of the school being in charge of disciplinary decision making.

While the school organization provided many more potential resources for the teachers, it was at the same time a much more bureaucratized organization, a much more hierarhical structure of control, than Countryside. While Countryside teachers may well have been hired directly by the superintendent of schools and might know school board members personally and have them visit in the classroom, the highest district offical with whom a teacher in Cityside might expect to have face-to-face contact would be the curriculum coordinator for their subject matter area. The Superintendent would rarely be seen at the school, School Board members probably never.

Curriculum Development. At Countryside, the teachers were responsible for devising their own curricula. At Cityside, by contrast, there were district curriculum coordinators for different subject matter areas, and detailed curriculum guides were issued to the teachers. These guides listed objectives and goals for a given course (although sometimes these were stated in rather general terms) and in some cases contained suggestions for specific activities for attaining the objectives.

In addition to the guides, the district organized a wide range of inservice meetings, before and during the school year, many of them geared to the demands of particular subject matter areas. Both of the teachers

interviewed reported that such seminars had been important influences on their teaching. Finally, a regional service center--offering materials and other forms of assistance--was located in the city and was readily accessible to the Cityside teachers.

The Teachers

Pay. The relative affluence of the Morton school district was also reflected in its pay scale for teachers. The average teacher salary in the district was just under $20,000 (compared to less than $12,000 in Countryside), and beginning pay in Morton was higher than the maximum salary at Countryside. Salaries varied on the basis of years of service and educational credentials (i.e., the longer one worked the higher the salary--although this reaches a maximum after about 12 years). Also, teachers with Master's degrees were paid more than teachers with Bachelors degrees, and in some cases, according to the teachers, the district offered stipends to people pursuing advanced degrees).

Hiring practices at Cityside differed greatly from those at Countryside. At Cityside, prospective teachers applied to the district personnel office and were then referred to schools with openings. Prospective teachers were then interviewed by the principal, the vice-principal, or in some cases by the department chairperson in their subject matter area (practices may have varied from school to school in the district). The ultimate decision for hiring, however, was the principal's.

Because of the relatively high salaries and the presence of large numbers of newly trained teachers from the several colleges and universities in the area, there were no shortages of applicants. While Countryside had been a sellers market, Cityside was a buyers market. According to one administrator

at Cityside, "We interview five or six people for one position." Another explained: "Morton's in a somewhat unique position, being a university town. You don't have to look too far [to find a teacher]." Teacher turnover was not a significant problem at Cityside.

Opportunity for professional development. While teachers at Countryside were essentially isolated, teachers at Cityside worked in circumstances conducive to the development of collegial ties. They could, for example, participate in "team teaching" activities (as both of the teachers in the TBS study had). For example, Mr. Franklin, the teacher examined later in the paper, recounted that when he had taught at the high school level:

> We had a large open area, half was English and half was social studies . . . that was a very positive experience . . . you really had to keep your stuff together because you were working constantly with four teachers [The other social studies teacher in this arrangement] had been teaching social history for 14 years, and so she had file cabinets full of stuff . . . and of course, I stole whatever I thought was good and adapted [it] to my teacher personality. A lot of the stuff I'm using here I got from her. It's nice to have the isolation and the ability to do what you want with your own content, but when you're isolated you don't tend to get very stimulated from the other people.

Teachers at Cityside could also have student teachers in their classrooms (which never took place in the Countryside district because of its distance from any training college). Both of teachers who participated in the TBS had had student teachers in their classroom, and had valued the experience.

The existence of content area "departments" was another feature of teaching at Cityside that promoted the development of collegial discourse with other teachers. In addition to working together in departments, teachers at Cityside work together on various committees and have fairly active unions. The teachers' lounge at the school was large and teachers can comfortably carry on conversations there. These could sometimes result in changes in teacher practices:

> The warm-ups are something I added last year . . . the math teachers were always talking about their warm-ups in the lunch room . . . this one math teacher and I were pretty good friends and we'd sit together and visit and she told me that it was something they did when they [the students] came in and that way they settled down, and that was something that was bugging me. So I tried to think of what I had that I could use as warm-ups, and I did use spelling right away, but I also used some little worksheets . . .

Teacher assessment and evaluation. A beginning teacher in the district was put on probation for 3 years. This meant that at the end of a school year the teacher could be dismissed without appeal; the district could simply decline to rehire the teacher. After the 3 years of probation, the teacher would be eligible for a 3-year contract:

> And if you're on a 3 year contract, then they can't terminate that contract, without telling you that you're back on probationary status. It gives you some security . . . if you're on a 3 year contract, they have a longer, more involved evaluative process [than if you're on probation].

The evaluation process in general was much more routinized and systematic at Cityside than at Countryside. At Cityside:

> Each year . . . the school board requires the administration to come in . . . there's a long form on teacher compentencies . . . it's like 73 competencies that we're supposed to have and they're supposed to be observable things . . . It's a Likert scale kind of thing, where it's "outstanding", five, four, three, two, one. "One" being some sort of potted plant . . . what usually happens is that they give you one and you do it. And then they do it--they've done observations over the year . . . when you have your evaluative conference, then you go in to the principal and he gives you this thing, and then he marks his, and then you reconcile the two . . . And then that goes in your file. But to me, the important thing is the observations, most of them do a kind of episodic observation.
>
> Interviewer: It's the principal or . . . ?
>
> There are usually two people who come in: the assistant principal, the principal or the subject area coordinator for the school district.

Although it was more thorough than at Countryside, the teachers interviewed for the TBS felt that the evaluation process at Cityside was geared primarily towards satisfying administrative needs (e.g., providing

rationales for rehiring or dismissing teachers) rather than towards improving teacher practice.

School-community Relations

Unlike the situation at Countryside, there were no close ties between school personnel and the neighborhoods served by the school. Many of the teachers, including those interviewed in this study, did not live in any of the three communities served by Cityside, nor did the teachers speak of running into parents in nonschool settings. There was no sense, as there had been at Countryside, of "the community" having certain values and expectations that the school had to abide by. The teachers did, however, have certain expectations and assumptions about the different neighborhoods served by the school. Students from the three catchment areas described earlier were recognized as distinct populations by teachers at Cityside school:

> Some of the people come from [Area C] which is a kind of indigenous community made up mostly of Mexican-American and Black people . . . It [Area C] was there before Morton, the people who came and surveyed for this town camped there . . . the feeling of community is real [there]. . . . [Area C] is like a small town, and [Area B] is like the ghetto in a big city. . . . The [Area B] people are all Black, or almost all Black. And then we have the community that lives around the school [Area A]. The community that lives around the school is by definition educated, relatively affluent--the real estate is very high, it's traditionally been high . . . and almost all professional people . . . almost everybody's father works for IBM or is a doctor, or a lawyer, or business executive, or some such stuff.

Some of the teachers also believed that parents and students from the various groups possessed different educational aspirations and expectations. Mr. Franklin, one of the teachers described later, had once taught in a high school serving Area B:

> I was always teaching kids who were the first kids in their family ever to graduate from high school. . . . I would love to go to graduation because there was no pomp and circumstance, and all this kind of stuff. There was applause: "Yea!, we did it." . . . These people [from Area A] . . . it's all real predictable, I mean, the guarantee is there. It isn't a question of if you're gonna go to college, it's where--which college is gonna be good enough, or are you gonna be good enough for.

Forms of parental influence. The social differences between the groups from the different areas (and the geographical separation of Areas B and C from the school site) were reflected in differing levels of parental interaction with the school. Whereas at Countryside parental interactions with the school had been informal and indirect, at Cityside parents were organized into a PTA, and most parent contacts with the school took place through the PTA.

For the most part, however, the PTA represented only one segment of the Cityside clientele: it was composed mainly of and was dominated by parents from Area A. Attempts had been made to diversify the membership: Buses were provided to shuttle parents from Areas B and C to meetings (all of which were held at the school), and attempts were made to recruit parents from Areas B and C to the PTA governing board--but none of these measures had had significant success. The teachers interviewed suggested that the lack of participation from these areas was a result of there being more single-parent households in Areas B and C, with more parents working night jobs. It was also thought by one of the teachers that the poorer, less educated Blacks and Mexican-Americans from Areas B and C might be intimidated by the affluent Anglo PTA members.

In fact, the activities carried out by the PTA did reflect the affluence of its membership. As one teacher put it, the PTA

> does nice things for the teachers [i.e., gives them meals on holidays, buys them exercise machines] and they provide volunteer support. They have a coordinated volunteer thing, so if you need somebody to help you, they provide tutors, they provide materials, they provide speakers . . . they'll be the contact point between the community and the school. And if you want somebody to come in and talk about this or that, they'll help you find somebody.

There was, however, another side to this matter: It was the affluent parents from Area A who were said to be most involved, sometimes intrusively, with the school:

> The parents up in [Area A] are supportive, but they--I hate to generalize and yet I'm doing it--If there'd be a problem where the parent would stick up for the kid and get after the teacher, or really criticize the teacher, it would be more [likely to be] someone from this area [Area A] than from [Area B or Area C].
>
> There [i.e., in Areas B and C] it's more like, well, the teacher knows best, or the teacher is right.
>
> Interviewer: What do you think the difference could be?
>
> Part of it . . . might be . . . well, if they didn't have as much education I think they'd feel like the teacher, who has more education, would know better, and so what the teacher says is right. And here too, when someone is earning probably two, three times as much as I am [as the people in Area A do], they probably feel they have a right to jump all over me . . . they're more used to maybe being in positions of authority where they give orders.

As the same teacher remarked, in another interview:

> [The Area A parents] are used to having things done a certain way . . . one of the big things, I think, when the busing started [was] the other schools where these [the Area A] students went [had] certain programs added--or they made sure that they were where those programs were so their kids would have them. They're not going to take second fiddle to anybody, you know. . . . They make their needs heard, they definitely can be vocal.

Cityside did in fact have some special program offerings. It was, for example, a "foreign language magnet school" offering instruction in such languages as Spanish, German and French (Countryside, by contrast, had no foreign language instruction). Whether this was coincidence or the result of parental pressure, however, is not clear. Overall, it would seem that Cityside parents, though better organized and (at least in the case of parents from Area A) more likely to intervene than Countryside parents, probably had less overall influence. The layers of administrative hierarchy at Cityside effectively buffered teachers from outside interference.

The Setting of the School

Middleburg junior high (grades 7 and 8) served just under 700 of the 4,100 students attending grades K-12 in the Middleburg school district school. The district itself, geographically one of the largest in the state (with a catchment area of almost 400 square miles), was located between the Countryside and Cityside districts (indeed, it shared boundaries with both).

The Middleburg district was not based in a city or town. It served no core community. Instead, the district's complex of schools (the elementary school and the junior and senior highs were located immediately adjacent to one another) were located just off the highway between Morton and Dewey (the sites of Cityside and Countryside respectively)--isolated except for a fast food restaurant, a gas station/grocery mart, and a few blocks of recently constructed apartments serving military personnel from the nearby base. This base, from which the district drew approximately a third of its students, was located on the opposite site of the highway from the school complex. All students in the Middleburg district either drove to school or were bussed to and from school.

These circumstances make it difficult to describe the social, economic or community setting of Middleburg. While the military base contributed the largest single block of students, it was far from being a socially or economically homogeneous block. Parents from the base represented all ethnic groups and their occupations ranged from manual labor to professional work (with corresponding differences in income). Many had moved frequently and students from the base entered Middleburg with a vast array of previous school experiences.

Aside from the base, Middleburg drew a large group of students from a nearby Mexican-American community (with socio-economic chacteristics essentially the same as those of the Area C catchment area served by Cityside), as well as from a predominantly poor, Black neighborhood on the outskirts of Morton. At the same time, however, the school drew significant numbers of students from a large number of very small farming communities dotting the countryside between Morton and Dewey (with both very poor and very affluent families represented in this group). All in all, the student body of Middleburg was divided almost equally among the major ethnic groups in the area: a third Anglo, a third Mexican-American, and a third Black. Because of the structure of the district, however, accurate Census data on median income and educational attainment were not available.

Regardless of the economic characteristics of the setting, however, it can be said that the district itself had a low tax base and hence a fairly tight budget for education. Though by no means as poor as Countryside, funding for the schools was considerably lower at Middleburg than at Cityside.

The School

Physical Plant. The Middleburg junior high school building had two levels. The library, office, and most of the classrooms were on a main ground floor, while there were additional classrooms in a basement. The gym and the lunchroom were in separate structures. The building, though considerably larger than the Countryside building, was used to full capacity and teachers had to work in the teachers' lounge, or in the library, during their planning periods, as other teachers would be using their rooms.

This circumstance caused some inconvenience (e.g., teachers found it hard to find a quiet place to work during their planning periods, had trouble putting up bulletin boards and so forth, since other teachers would be in

their classrooms teaching while they had conference periods). However, because the teacher/student ratio was higher, the lack of space did not result in the sort of overcrowding in the classroom found at Countryside. Middleburg worked on a six period schedule (the teachers teaching five periods, with one period off for planning) and the class sizes were similar to those at Cityside (roughly, 20 to 25 students).

Materials. The Middleburg teachers submitted budget requests at the beginning of the year, listing their needs for materials, teaching supplies, and the like. These requests were reviewed by the school principal, and if they passed this scrutiny they were then submitted to the school board for approval. Departments did not receive their own budgets (as at Cityside) nor did individual teachers receive a set level of discretionary funds (as at Countryside). Neither of the teachers interviewed for the TBS had had budgetary requests refused, although it was tacitly understood that one did not make "outrageous" requests.

Assistance from the office. Middleburg shared organizational characteristics with both Countryside and Cityside. Like Countryside, there was little organizational distance between the top of the district hierarchy and the individual teacher. Again like Countryside, the Middleburg district had to rely on limited resources. Where the Cityside district could put on an elaborate series of inservice meetings for its teachers, the Middleburg district had to rely on state-offered inservice offerings--and not always with positive results. The Middleburg principal's description of his experiences with the regional service center were remarkably similar to those of the Countyside principal:

> Last year we were supposed to have a workshop out here on using language in the classroom as a more effective means to maintain discipline and effective communication. Okay, we had it all set up, we were going to spend the whole day doing it. The service center sent us three people.

> None of the three knew what our topic was going to be when they got here. Two of the three said they would not hold that session because they were not qualified. They said it was not their field and we just had to call it off. It was a pretty sad situation.

However, in terms of the resources offered by the district, Middleburg resembled Cityside much more than Countryside. The counseling system was well organized, and there were strict guidelines for referring students who were discipline problems to the office (corporal punishment was practiced, but had to be done by the vice-principal rather than the teacher).

Curriculum development. One feature of the Middleburg school organization that differed strikingly from the Countryside district was the elaborate attention to curriculum displayed throughout the district. Unlike Countryside, where teachers had only a textbook as a guide to what to teach, and unlike Cityside, where curriculum guides were developed and distributed at the district level through the work of a curriculum coordinator, Middleburg teachers (working in departments organized around subject matter areas) were asked to develop their own curriculum guides to meet specifications set up by a district curriculum supervisor. The curriculum guides listed course objectives, and the teachers were required to turn in lesson plans which systematically incorporated those objectives (and were evaluated, in part, on this basis). Teachers were free, however, to devise the activities that were to lead to these objectives.

It was clear from talking to the teachers that these regulations were not strictly enforced: although the district curriculum supervisor (or someone from his office) observed the teachers at least once each year, there was no regular examination or check of the relationship between plans and performance (nor, apparently, were the quality of the plans attended to: one teacher said

that she simply listed the numbers of the objectives being covered, saying little about how her activities were to achieve these objectives). At the same time, it seems that the district curriculum office did intervene in significant ways in particular program areas (e.g., the remedial components of some of the programs) which were being supported by funding from outside the district. In short, a major concern of the office was to ensure that the programs stayed in line with state funding agency requirements.

The Teachers

Middleburg teachers were not as well paid as teachers at Cityside, nor were they as poorly off as the Countryside teachers. Since Middleburg was not based in a town or city, all of the teachers at the school commuted--most of them from the nearby town of Morton. However, Middleburg was not in the same relationship vis-a-vis the Cityside district as was the Countryside district. It did not face massive turnovers in its staff each year caused by experienced teachers seeking better paying jobs in the Cityside district. Teacher turnover (out of a total faculty of about 40) ran at something between 10% and 15% per year (compared to a minimum of about 30% at Countryside, for a faculty of less than 30--the size of the student bodies at the two schools was about the same). Middleburg also possessed a large, stable core of teachers who had been at the school for 10 years or more; while the very fact that there was more than one teacher per subject area per grade level (as had been the case at Countryside) also made the school more resistant to disjunctions in instructional offerings caused by turnover.

The pay at Middleburg, then, was neither so good as to be a major attraction to the school, nor so bad as to drive teachers away. What, then, brought teachers to the school? Some, apparently, had simply been

unsuccessful at finding jobs in the rather selective Cityside district. Because of the close proximity of Middleburg to Morton, teachers living in the city could easily commute to the school (whereas the relatively longer drive to Countryside, in addition to the poorer pay, was a great incentive pushing commuting teachers to seek other jobs). In addition to such factors, however, Middleburg had some positive attractions: teachers and administrators (even those who had had not first hand experience in the Morton schools) asserted that the Morton district was riddled with "red tape" and bureaucratic constraints--most importantly, restrictions on the ways teachers could treat students (e.g., discipline matters). The Middleburg school district, by contrast, was said to be very "supportive"--especially in matters of discipline.

Opportunity for collegial development. There were, on the whole, many more opportunities for the development of collegial or professional ties at Middleburg than at Countryside. Teachers were organized into departments which periodically met to talk over textbook selection and the design of the curriculum. At the time of the TBS, departmental chairpeople were appointed by the administration, and the strength of the departments varied with the enthusiasm of the appointed leader. In some subject matter areas teachers were clearly working together, in others, the departments seemed to exist only on paper.

In addition to this, in areas such as Math, some of the courses (e.g., those for remedial students) were "team taught." In practice, this meant that the teachers alternated teaching the class--still, they had to work jointly in developing the syllabus and evaluating the students (in some cases, of course, this resulted in teachers being paired with colleagues with whom they could

not get along). Because of its closeness to towns and cities with teacher training institutes, Middleburg was also able to use student teachers.

Assessment and Evaluation. Teacher evaluation at Middleburg resembled the system used at Cityside: teachers were observed several times a year, both by administrators in the school, and by district personnel (usually the curriculum supervisor or someone from his office). As at Cityside, the Middleburg teachers were given the same evaluation forms to fill out as were used by the administrators observing them. After the observations were completed, the teacher and the observer met to discuss any problems that the observer might have seen, and the teacher was asked to sign the evaluation form filled out by the observer.

According to the teachers, the purpose of these evaluations was strictly to provide district administrators with information on hiring and firing decisions. Teachers at Middleburg had even less job security than the Countryside teachers: they were given one year contracts with no tenure. As one teacher explained: "if they don't want you around anymore, they don't have to fire you. They just refuse to renew your contract." There were procedures that could be followed if a teacher wanted to contest a dismissal, but neither teacher interviewed for the TBS had heard of these being used. As one put it: "teachers are very rarely not rehired."

School-community Relations

As Middleburg served no identifiable community or set of communities, there was very little evidence of school-community interaction. According to the teachers and administrators, the main--almost the exclusive--focus of community activity was the football team. Unlike Cityside, where the PTA was well organized and active, there were no PTAs at the junior high or high school levels in the Middleburg district. Unlike Countryside, where community

members met and talked with school personnel on an informal basis, most Middleburg teachers lived far from the school catchment area. Indeed, the teachers were so unfamiliar with the areas served by the school that district officials felt obliged to organize bus tours for the teachers to the various communities and neighborhoods served by the school.

However, the teachers had formed fairly concrete attitudes and opinions about the different groups served by the school. Mexican-American students were said to have language problems, while Mexican-American culture and parental values were thought to put little emphasis on school achievement. Blacks were said to be somewhat more motivated to succeed in school, though generally less so than the anglo students. However, the students from the military base, regardless of ethnicity, were held to be the best students in the school. As one teacher explained about these students:

> How they achieve in school is very important to them, and then there are some that have traveled a lot. I find with the [students from the military base] that you either have a student that is very good because he has had to learn to adjust [i.e., to frequent moves] or you have the other kind that has not been able to and . . . it's a problem for him every time he has to change.

Much as was the case at Countryside, the parents of the Middleburg students were said to value strong "discipline," and, according to the teachers, the school had acquired something of a reputation for hard discipline. However, the community's attitude towards discipline seemed to be supportive of policies favored in any event by the administration--rather than pressures or spurs of policy. In short, there was apparently little or no community influence on school practice at Middleburg. In this case however, it was not because of the presence of a large district hierarchy which absorbed possible interventions by parents (as at Cityside)--it was, instead, because the "community" itself was widely dispersed geographically and highly differentiated socially.

Possible Implications

The three schools examined in this chapter clearly differed in many ways. In one sense these variations are important simply because contexts themselves are important: they influence the ways teachers can teach. At the same time, however, contextual features are only components of activity systems--they are not independent causal agents. Contexts do not <u>determine</u> how teachers teach, but teachers act and make sense in terms of them.

Consider the various ways in which schools and settings might influence the ways teachers work. The most blatant forms of influence--for example, direct interventions in teachers' classroom practices by school administrators or community members--are probably the least likely to occur (Warren, 1973). There are, however, more subtle forms of influence.

For example, the availability of material and social resources in schools act as "structural limitations" (Wright, 1979) on teachers' practices. That is, they define the range of variation in teaching practices while producing pressures which make certain types of alternatives within this range more or less likely to occur. However, while structural limitations define the range of options, they do not require that teachers choose a particular option. Nor is it the case that every possible option will be manifested by one or another teacher in a given school--that is, the parameters of structural limitations cannot be defined simply by observing what a group of teachers are actually doing.

The number of classes teachers had to deal with, the total number of students they had to work with during a day, the physical size and shape of their classrooms, the availability of materials and other resources--these all set structural limitations on what the teachers could do. At Countryside, the short class periods, large numbers of students, cramped quarters and lack of materials created pressures for highly routinized and impersonal instructional formats. At Cityside, by contrast, the relatively leisurely pace of the day,

the small class sizes, the relative abundance of special materials, and so forth, made possible more richly diversified instructional formats.

These sorts of generalizations, however, must be treated with caution. It is true that three of the four Countryside teachers did use highly routinized and impersonal instructional procedures while the Cityside teachers used comparatively very diversified instructional repertoires which allowed them to attend more to the needs and characteristics of individual students. However, the one Countryside teacher who did not fit into this pattern (the English teacher, Ms. Skylark) was in some ways much more like her counterpart (the English teacher, Ms. Richards) at Cityside than she was like her co-workers at Countryside. Moreover, the three teachers at Countryside, though all could be characterized as having routinized and impersonal instructional systems, each had fundamentally different reasons for teaching as they did, each had fundamentally different goals--and the ethos and tenor of the three classes were remarkable different. In short, the resource distribution mechanisms created a universe of possibilities (and made some more probable than others), but did not specify which would in fact come into existence, and did not completely specify the substantive form the manifested options would take.

A more deterministic form of contextual influence can be referred to as "selection" (Wright, 1979). "Selection" refers to processes which either exclude or prescribe the realization of certain possible configurations. Thus, for example, the distance of Countryside from any teacher training institutions apparently made it impossible for the school to have any student teachers. This meant, on the one hand, that Countryside teachers never had the chance to work as cooperating teachers--it also meant, by implication, that student teachers were not being exposed to schools like Countryside in their pre-service teaching experiences. Again, the size of Countryside's

staff made it impossible for teachers to "team teach" or teach classes cooperatively. At Middleburg, however, this was mandatory for some teachers; while at Cityside it was quite common. Finally, policies such as the one banning corporal punishment at Cityside were ways of excluding teachers who relied on this practice (e.g., teachers such as Mr. Larson, whom we'll look at in the next chapter). At the same time, pay policies constitute selection pressures when they move towards extremes, as at Countryside (where many of the better teachers left as soon as they could).

Again, however, the ways even deterministic policies of this sort influence practices depends in great part on the teachers in question: for some teachers a ban on corporal punishment, or the lack of counseling services, or whatever, wouldn't matter at all. For others, it might make a crucial difference.

Other forms of contextual influence could be enumerated, but as the illustrations above should suggest--and as the case studies in the next chapter should demonstrate--influences vary greatly within and across contexts according to the particular characteristics and statuses of the individual teachers involved. That is, some teachers will be greatly influenced by contextual features that hardly affect other teachers, while two teachers might be influenced in completely different ways by the same contextual feature. In short, as suggested earlier, teaching practices are the dialectical products of the complex interaction between characteristics of the setting or context (which should be conceptualized at various levels: district, school, and classroom), and characteristics of the teachers (their belief systems, knowledge systems, social status, career goals, personal interests, and so forth).

It can be said then, that features of the environment create constraints and limits on action, and perhaps produce pressures for certain forms of action. At the same time, individuals and groups create social or

idiosyncratic representations of environments--definitions of the situation--on the basis of their beliefs and knowledge systems.

The present chapter has sketched out some aspects of the environments of the teachers involved in the TBS. However, these are by no means complete descriptions. In the next chapter it will become clear that there are at least two other sorts of contextual features that need to be examined. The first of these is the subject matter areas and grade levels that teachers teach. How does teaching math differ from teaching English? How does teaching high school differ from teaching junior high? As the next chapter suggests, these are contextual features of enormous possible consequence.

A second set of features derives from the fact that teaching, at least in the region which served as the setting for the TBS, is an occupation characterized by a high degree of "mobility." This is not, however, the sort of mobility generally referred to in sociological studies of teaching (e.g., Lortie 1975, pp. 84-85), where the focus is on the movement of teachers to and from different levels of power and authority in the school or district hierarchy. Instead, "moblity" here refers to the fact that many teachers in the region seem to teach different subject matter areas, at different grade levels, in a number of schools in the course of their teaching careers. Teachers may also often drop out of teaching for periods of time--to raise families or to try their hands at other forms of work. Teachers, in short, have varied careers, and they carry with them memories and orientations shaped by these careers. This fact will assume significance in the following chapter.

CHAPTER THREE:
THE TEACHERS

Most of this chapter is taken up with case studies of each of the eight teachers who participated in the TBS. The case studies run about 10 pages apiece, which makes the chapter rather long--though from another perspective one could say that it represents a drastic compression of some 2,000 single-spaced pages of interview data. Indeed, these case studies are not intended to represent complete, comprehensive, or even thorough accounts of the belief systems of the teachers described: that would require a somewhat different sort of research, and monograph-length studies on each teacher. Nor do the case studies contain comprehensive descriptions of the types of instructional and interactional processes found in the classrooms of these teachers, though the descriptions should be adequate to give the reader an accurate feeling for the types of things that went on in these classrooms.

Instead, the case studies are attempts to isolate the teachers' beliefs about their roles as teachers and the purposes of the courses they teach, and to trace the linkages of these conceptions to the teachers' practices and to the contexts of their work. In short, the aim of the chapter is to examine the beliefs that make the teachers' actions seem reasonable to them.

The case studies, each of which represents an analytical summary of the data on the teacher's beliefs, are written as descriptive narratives, with a minimum of jargon. To facilitate comparisons across cases the teachers are grouped according to the subject matter areas they taught: first the history teachers, then the English teachers, and finally the math teachers.

Mr. Larson: A Countryside History Teacher

Mr. Larson was in his second year as the seventh-grade history teacher and football coach at Countryside. He had taught social studies and coached football in a number of rural or semi-rural schools over the previous 16 years, and it was in fact his coaching abilities that had gotten him hired at Countryside. The district Superintendent was a former coach who had competed against Mr. Larson when both had been head coaches at the high school level. He remembered Mr. Larson when the latter applied for the job, and hired him.

This dual status of history teacher and coach was apparently not uncommon. As the Countryside principal explained, "There's always been a coach teaching history [at Countryside]." Mr. Larson himself put it this way:

> Here's the way it's done, and this is the way it's done in most school systems. They'll keep the P.E. and the history jobs open [for coaches]. I'll bet you that . . . three-fourths of the coaches are certified in history . . . They wouldn't tie up a history job with somebody wouldn't coach, nor P.E. either . . . Like there's a woman up here, and she taught American History last year. Well, they added a coach in high school [and] they just shipped her over to English and gave that American history job to the new coach.

Mr. Franklin, the 8th grade social studies teacher at Cityside (who himself was not a coach), explained the reason for this practice:

> Let's face it, that [social studies] is the easiest certificate to get. I mean, if you've got a P.E. certificate you've got, by law, to take so many social studies courses, and to get a second certification in social studies is real common . . . You can only have two P.E. teachers, and all the rest of the coaches--I mean when you've seven or eight assistant coaches at a high school, they gotta teach something. So they tend to be in industrial arts, drivers education, and social studies.

Mr. Larson's position as a history teacher/coach is the crucial fact in explaining his beliefs and practices. Before that issue is examined, however, it is necessary to look briefly at what Mr. Larson did in the classroom and how he talked about it.

Mr. Larson Talks About His Teaching

Mr. Larson's classroom had a number of features which did not change throughout the semester in which he was observed. Principally, he taught by having the students read the textbook aloud--each student reading two sentences and then another student reading (seating order determined who would read after whom). These oral readings could be interrupted in one of two ways. First, Mr. Larson would occasionally stop at some point to present a monologue or to digress on the information in the textbook or to introduce information not in the text. Secondly, whenever the students came to questions in the textbook, Mr. Larson would stop the oral reading, solicit volunteers or assign students to look up answers to the text questions, give them a few minutes to find the answers, and then have the students read these answers to the class (these would sometimes serve as the opportunities for teacher digressions or monologues). Only the text questions dealing with the recovery of facts from the text were used--questions asking the students to explain or offer opinions on events were skipped.

Aside from the read-aloud sessions, the students spent most of their classtime doing seatwork of a highly routinized nature. Most of this had to do with keeping notebooks: the students were required to copy down the text questions from the book (the same ones they had answered orally in class) and to write out their answers to these questions. The students also regularly spent entire class periods tracing maps from the books and coloring them in (these also became part of the notebook), while one day a week was devoted to showing films (which were not necessarily related to the current lesson).

What sort of underlying conceptual system formed the infrastructure of this teaching style? As a way of getting at this issue, let us examine in more detail some of the instructional features outlined above, and Mr.

Larson's rationales for them. To begin with the major classroom activity--the read-aloud sessions--it is quite clear that for Mr. Larson this was the essence of his teaching. As he explained:

> Now generally, how I teach class, day in and day out, as far as the actual teaching will go, I have the students read. I have them read two sentences at a time . . . each student . . . I think that's working out all right as far as the learning experience goes, because the rest of the students have to follow along in the book, so they should get the idea anyway.

One can infer from this that Mr. Larson equated the textbook content with his subject matter (in the fashion of the math teachers who we will look at later). In his explanations of the practice, however, the emphasis was on the management function of the task rather than its usefulness in transmitting content. That is, the advantage of oral reading, as Mr. Larson saw it, was that its public nature forced the students to stay on task:

> When you're reading like this . . . in order for them to be able to find their place they have to pay attention, you see. So I think that that is the advantage of doing it like this. The disadvantage [is that] it's questionable whether they all hear, but . . . if they're all keeping up, they should all understand it anyway.

During these oral reading activities, Mr. Larson remained seated at his desk in the front of his room, rarely looking up, his eyes on the open book in front of him. He did not interrupt the readers to explain, elaborate, or foreshadow the material being covered in the text. The only exceptions to this occurred when Mr. Larson reacted to prompts or cues in the textbook. When geographical features or settlements were mentioned in the book, he would sometimes rise and point them out on a map of the state that hung at the front of the room. Mr. Larson would also stop the oral reading whenever the students came to a set of questions in the book. Individual students, or groups of students, would be assigned the responsibility of looking up the answers to the questions, would be given a few minutes to do so, and then would recite their answers (usually reading aloud from the book) to the rest

of the class. This took place at every list of questions in the book, although Mr. Larson would usually assign only those questions that asked for identifications or brief descriptions. The students were then required to write out these questions--and the answers to them from the book--in their notebooks. The fact that opinion or analysis questions were rarely assigned (although there were usually one or two with each set of questions in the book) suggests that Mr. Larson, while he followed the content of the book religiously, did not whole-heartedly accept the intended functions of the book: That is, he used only those questions and exercises which fit into his highly routinized instructional system, and eschewed other possible uses of the text (e.g., discussion, projects, research, etc.).

Mr. Larson thus let the textbook supply all the course content and as much of the work as would fit into his simplified instructional system. The very few occasions on which Mr. Larson did venture into the subject matter of the course occurred when the students were going over the text questions. The following selection from field notes provides some of the typical flavor of his contributions:

> [The students have been assigned a question asking them to "briefly describe the explorations of the following explorers." One of the explorers listed is Francisco Vasquez de Coronado.]
> When they get to Coronado, which Dennis [a student] has been assigned to look up, Dennis reads from the book. Mr. Larson then proceeds to tell a story about Coronado. He prefaces his story by telling the students that he thinks he read what he is going to tell them in their book. Even if it is there, he is going to tell it to them anyway. He then proceeds to tell them that "Coronado came along and got the word from de Vaca that there were seven cities of gold. And he runs across this Indian. This Indian they call him Turk. I don't know why they called him Turk. I do know there was a lot of wild turkeys back in those times. Whether that had anything to do with it I don't know. Turk kept saying 'a little bit further, a little bit further, a little bit further on up ahead.' And that went on for days, months, months moved into years and finally they one day just hauled off and haw! [The "haw" is accompanied by a chopping motion of the hands.] They killed that Turk. Turk had a good time leading them all over the place. That Turk probably never saw any gold." Mr. Larson goes on to say that he

has been reading a book called Coronado's Children: "Probably a third or a fourth of the way through it. They talked about the gold and silver these Spanish explorers lost and most of the accounts of why they lost this Spanish gold and silver is because, for example . . . these Spanish soldiers, they had on all kinds of armor, all that stuff--they were weighted down. Trying to get away from some Indians and you're loaded down with what you call gold bullion--you had to bury your gold or bury your silver. I have read--whether this is true or not nobody has anyway of proving--but I read it anyway . . . Like Coronado you know. He's riding along and he has, say, 200 soldiers. And he takes along gold and silver to pay them, see. They may want to shoot dice or something. They can't have anything else to do with it. Anyway, those Indians get after them and they buried that gold. That stuff still hasn't been found according to the book. . . . [And then they go on to the next explorer. The story of the Turk, incidentally, is not in the textbook.]

Mr. Larson's explained that his purpose in telling such stories was to overcome what he felt to be the general perception that history was boring:

> I think that one of the common complaints you hear about history is that it's boring, you see, and I hate to hear that because to me it isn't boring, but evidently it is to other people.

With regard to his discussion of the "Turk" and Coronado's problems with the weight of gold, Mr. Larson explained that he introduced the stories because:

> Coronado was brought up in the textbook, you see. That was the decision why. In the second place, to make it more interesting. In the third place, to show that I had other interests besides just the book, you know. I thought it might be interesting to the children. The main thing, I just did it for interest. The main thing was to break the boredom. I already know that part of that story is in that book.

Such stories, which generally amounted to planned performance routines triggered by the content of the book, were Mr. Larson's only excursions away from the text. As he told his classes the first day of school: "In this class I will be teaching you what's in the book, okay? I'm teaching by the book." The students read aloud from the book, traced maps from it, answered questions from it orally in class, and usually spent one or two class periods per week copying text questions and answers in their notebooks.

The text questions also served as the bases of Mr. Larson's tests. For example, the text question on Coronado asked the students to describe the

explorations of the explorer. The appropriate answer--the one accepted in class--was the sentence from the book that immediately followed the first mention of Coronado: "Coronado marched through lands that are now part of Arizona, the Texas Panhandle, and central Kansas." The test over this portion of the text--like all of Mr. Larson's tests, a twenty item matching test--contained the following item to be matched to the name "Coronado": "Explored parts of present-day Arizona, Texas Panhandle, and central Kansas." In addition to having the students look up the answers to these questions in class and write them in their notebooks, Mr. Larson would spend one, sometimes two, class periods before a test going over the questions that would be on the test.

Mr. Larson explained his instructional practices in terms of the preferences and demands of the local school administrators. For example, Mr. Larson explained the routinized, repetitive, textbook-based nature of his classroom in terms of administrative demands that he "drill" his students on the information in the text. As he put it:

> in this school district, they want you to drill 'em. For example, if you took each of those questions [i.e., the text questions] . . . I covered [them] at least three times. They've answered that question in their notebook, they've answered it in class, [and] I have discussed it with them.
>
> Mr. Burns, our superintendent, said to drill 'em, and I can't deny that I drill 'em, whatever they say, 'cause I do drill 'em.

Sometimes this attempt to satisfy what he perceived to be administrative preferences created problems for Mr. Larson:

> Last year I only covered 14 chapters, and I'm hoping for 18 this year. The thing about it was, I made a bad mistake last year. The told us to drill 'em, and I made them draw every map in the first chapter [and in the first 6 weeks] I'd covered 40 pages. So this year I didn't do that. [I did] about two maps.

The emphasis on drill and repetition was also linked to inferences Mr. Larson made about administrative preferences--particularly with regard to parental pressures on the school:

> Let that parent see that "C" average on there, and they'll be out here wanting to know, "How come you're not doing a better job at teaching?" or why their kid isn't doing better. So when I give a "B," I'm really in all rights giving an average grade of a "C." I'll give a lot more "B's" than I will anything else . . . that's where my grading system's really set up . . . and I've never had a principal bother me about my grades in 16 years because they don't like those parents up here raising cain . . . and I don't look for it to change on that, ever.

Flowing out of his emphasis on "drilling" and his avoidance strategy of seeing to it that all the kids made decent grades, Mr. Larson made it a practice to cue the students to the questions that were to be on the tests:

> Those kids come along there and I tell 'em what's gonna be on the test: The most important questions in the book they need to study . . . The questions on that test are already in the book. I am rephrasing those questions, and feed it back to 'em, is what it amounts to. Now they go over it with the question one in class, once in their notebook, and once in review. So, they've heard it at least three times.

When too many students did poorly on a test, Mr. Larson gave them the same test again, with the questions rearranged:

> Nobody passed that thing in there. Fifty-five, I believe, was the highest grade in the class, so obviously, it's too hard. So I just give the test back to 'em, you know, more or less, and I didn't take the grade, gave them the same test again, had the old test to study, you see. If they can't cut that, they're too dumb to pass. . . . I thought it was a tough test, I really did, but the second time around it shouldn't have been, not with the dern questions and the answers there, and they're just rearranged, that's the only difference. Good Lord! How easy you gotta make it?

Finally, much of the way Mr. Larson conducted his class seemed to be fashioned to accommodate the system of teacher evaluation at the school. In some cases, as already suggested, evaluative statements by administrators provoked a direct response from Mr. Larson. For example, the principal complained to Mr. Larson that his classes moved too slowly and that he was not covering enough material. As a result, Mr. Larson cut down on the number of

maps that he had the students draw, and reduced the amount of time he spent preparing the students for their tests. Again, some of Mr. Larson's classroom concerns appeared to be related to the fact that the principal's primary method of "observing" teachers was to stand outside the door and listen to the classrooms. As Mr. Larson put it:

> He can hear pretty well what's going on. If you're real quiet, are you teaching, or what are you doing. Now, he came into my room and might have spent 3 minutes this year--which I knew was alright, because they've got to spend 30 minutes in there if they're going to fire you . . . It's a state law. . .

As if geared to this evaluative system, Mr. Larson's system of monitoring his classroom relied almost completely on attending to sound, and his management system was designed to keep the general noise level down. Visual monitoring was at a minimum. During oral reading Mr. Larson kept his eyes on the book. For example, when asked during a stimulated recall interview if he felt the students had been attending to the task while reading aloud, he replied, "Yeah, I thought they did. Of course, I've got my head down looking at that book, but I'm fairly confident that they're keeping up." When the students were doing seatwork (working on their notebooks, drawing maps, taking a test) he paced the room, often stepping just outside the door (perhaps to check the noise level), but rarely looked at anything the students did. The students, for their part, were able to carry on constant quiet conversations with their neighbors, move around and throw things behind the teacher's back, and cheat on their tests. They were very rarely caught. The majority of Mr. Larson's desists (other than those to two boys he had singled out as troublemakers) were shouts of "quiet!" or "shut it!" directed to the entire class rather than to particular students.

It appears, then, that Mr. Larson made sense of his teaching in terms of what he perceived as the expectations of school administrators. However, to

gain some idea of why this might have been so, it is necessary to examine Mr. Larson's career and to see how his present position fit into that career.

To begin, two rather straightforward aspects of Mr. Larson's career status can be mentioned. One was that his contract was up for evaluation at the end of the year. This probably had something to do with his scrupulous attempts to abide by what he perceived to be administrative directives.

A second aspect of Mr. Larson's career is less obvious. There was a certain affinity between schools such as Countryside and teachers such as Mr. Larson. The emphasis on tough discipline at the school has already been mentioned. Mr. Larson, for his part, frequently compared the attitude of the school and community favorably to another school district he had worked at (where there were more restraints on paddling--something Mr. Larson attributed to the fact that his principal at that school had been a "Yankee," and that many of the students' parents--the school served an Army base--were from the North, where paddling was not an accepted form of discipine). All of his teaching experience had been in relatively small rural towns. Mr. Larson suggested many times that he would not consider working in a large city school district, although he noted that the pay in such districts would be much better. Schools like Countryside, for their part, had difficulty attracting coaches because of their low pay scales, and were thus dependent on beginning teachers and on experienced teachers who, like Mr. Larson, preferred the rural atmosphere (cf. the teachers in Becker's, 1952, study, who became so accustomed to the harsher discipline systems of lower class schools that they no longer wished to transfer to the more attractive middle-class and upper-class schools.

However, while these factors were undoubtedly important, the crucial aspect of Mr. Larson position was certainly the fact that he was a football coach. As he and other teachers explained, coaching is characterized by a high degree of mobility. Part of this mobility is a product of the constant

attempts of coaches to move into more powerful positions (e.g., from assistant to head coach) while at the same time moving into larger, better funded, and more prestigious schools. The schools themselves contribute to this by their attempts to lure successful coaches to their programs. As Mr. Larson put it:

> Fellow told me one time that the only teachers had any money were the ones that stayed in the same place, but it doesn't work out that way. If you want to move up in coaching, you pretty well got to move.

Another reason for the high rate of mobility is that coaches tend to be evaluated more on the basis of the success of their teams than on the success of their classrooms--and the fortunes of a sports team are even more fickle than the academic accomplishments of students. Coaches are frequently fired or released from their contracts. Mr. Larson, for example, was asked when he was hired if he would resign if asked to (he said that he would). The longest Mr. Larson had stayed at one school during his 16 years of teaching was 4 years. As he explained:

> Usually what they do is ask you to resign if they don't want you. I never was asked to resign over any kind of a teaching deal . . . it was more of a coaching deal. For some strange reason that just didn't work out--they didn't pay you as much to coach, but that's what they'd holler at you for.

The high rate of horizontal mobility that Mr. Larson had experienced in his career appeared to have several consequences. First, Mr. Larson did not fit well into the community--he didn't sink roots, buy a home, or attempt to join local voluntary organizations. He displayed little awareness of the community (not knowing, for example, any of the School Board members). His only contacts with the community were via football games (and meeting fathers picking up their kids at practice). Mr. Larson's attitude towards his position at Countryside was somewhat fatalistic and he seemed to regard his position as inherently transient. "This really is a pretty good school system, it really is," he once commented, but then added: "Course I'll say that, and they'll turn around and fire me sure as hell."

A second consequence of Mr. Larson's career pattern was that--because the primary reason he would be hired was for his coaching skills--he would simply be slotted into whatever social studies teaching position he was certified for, at whatever grade level. Thus, he had taught all the grades from the seventh through the 12th, and a variety of subject matter areas including P.E., health, world history, American history, and Texas history. These frequent shifts in subject matter areas and grade levels might explain in part his reliance on the textbook as the sole source of content. He himself complained of his lack of knowledge about the subject matter he taught:

> I wish I would have had more Texas history [in college], but you have to understand the way they'd done it in these colleges . . . to be certified to teach history [you only need] 24 hours . . . we just covered from the time the Spanish came . . . up until about 1850. As far as recent Texas history I haven't [had] a class.

This circumstance may have had something to do with Mr. Larson's assertion that the most important events in the history of Texas were the Alamo and the Battle of San Jacinto (both pre-1850 events), and the fact that his class (at least in the previous year) covered only the period of Texas history prior to the Civil War (though the textbook deals with events into the 20th century).

A more fundamental point, however, is that Mr. Larson, unlike some of the teachers to be examined later, who also relied heavily on the text, wasn't really teaching "content" at all: he was managing the book--that is, he was trying to move the students through the chapters in the most "efficient" way possible (efficiency being defined, as described above, in terms of the things that he thought would satisfy the administrators and insure his job: keeping the students busy, accumulating work, keeping the grades up, and keeping the students quiet). This may mark Mr. Larson as an unusual case, but perhaps only in the sense that he represents an extreme stage of the process by which success as a "teacher" comes to be defined in a crude, highly routinized manner.

Ms. Cargill: A Middleburg History Teacher

Ms. Cargill was in her fourth year as the 7th grade social studies/Texas history teacher at Middleburg. In her three years at the school prior to the TBS fieldwork, she had taught 8th grade Social studies/American history as well as the 7th grade class. Her present position, however, was only the most recent stopping place in a long and complex career. As she explained it, she had not started out wanting to be a teacher. Even after deciding to teach, it had been some time before she arrived at a decision about what to teach:

> I started out [in college] in business, and I did not have shorthand in high school and I found that very difficult to pick up in college. . . . I was still going to teach it though, I was going to teach business. [But I] decided I was not that good in math. And then when I transferred to the university, I guess the advisor sort of steered me into social studies. After talking with her and she asking me, you know, what kind of interests do you have. And I've always loved history. And I suppose my high school teachers had some influence on me as far as history was concerned. I did not have coaches teaching me high school history. I had some real strong teachers.

After graduating with a B.S., Ms. Cargill taught third grade on an "emergency" basis (i.e., as a long-term substitute) for a year. She then dropped out of teaching for two years to begin a family, then went back to teach another year on an "emergency" basis, and then worked steadily as a substitute teacher for the next 13 years as she raised her children. At that point, with her children beginning to leave home for college, Ms. Cargill decided to go back into teaching on a full-time basis, and taught most of the next year (as a replacement for a teacher out with medical problems) in a recently desegregated high school in Arkansas.

Ms. Cargill then moved to the Morton area and began to look for work, though without much success. At one point, she contemplated leaving teaching altogether and even took a job outside the field:

> I went to work for the IRS for six months, and could not stand the pressure and the business of always having to answer for everything I did. I felt like I was not treated like a responsible adult. I did not care for the pressure of speed. Not necessarily accuracy, but speed.

> They didn't care how well I did my work, just how many pieces of paper I shuffled, and I just decided that was not for me, and I went back to substituting and decided I was gonna stick with that until I found a position.

Finding a job, however, was no easy matter:

> I found it difficult to find any kind of teaching job, because of my age, I guess, I'm not real sure. I substituted for three years in the Morton schools . . . in mid-school and high school. I even finished out two years for teachers that took maternity leave. . . . [In the first school where she replaced a teacher] I thought sure I was going to get in in the following year--and they just didn't have an opening for a social studies teacher. Plus the fact that, in Morton schools, if you're hired, and they have to re-shuffle their teachers the following year, then you can be assigned to any school in the district -- and I did not really care for that . . . [In the second school where she substituted, the principal wanted to hire her, but] he could not hire me in social studies. . . . He finally was forced to hire a coach . . . because he, being a mid-school principal, was probably told by the athletic director that he had to have this coach--and . . . they've got to place them in things that they can teach. . . . So, when that happened, I decided, I may never get in here, because most coaches can teach social studies.

Ms. Cargill therefore began applying to the many small schools surrounding the Morton district. Her first job offer came from Middleburg and she accepted it, though it meant she had to commute a long distance each day. As already mentioned, she had taught both 7th grade social studies/Texas History and 8th grade American History for her first three years at the school. The year she participated in the TBS was her first teaching 7th grade solely. Ms. Cargill's brief encounter with the non-teaching labor market continued to color her feelings about teaching:

> I am satisfied with teaching mainly because of my experience with IRS. I feel like I have had a choice in what I want to do. And I like variety, I like the idea that you're your own boss, in own room, within reason. You don't have to constantly answer to somebody. I like the interaction with students. Every class period, every day, is different. God, that was another thing I didn't like at IRS: It was just <u>so</u> very boring.

The curriculum and social organization of Ms. Cargill's classroom were more diversified than those of the other teachers in the sample (with the exception of Mr. Franklin). In addition to Texas history, for example, her curriculum included a long unit on the American Consitution, as well as a unit

devoted to the local history of the area served by the school.

Instructionally, Ms. Cargill utilized a very wide range of activities. Unlike the classrooms of the Countryside social studies teachers, students were not asked to read aloud from the book (though Ms. Cargill would very infrequently read aloud sections of the book which she felt were both well written and dealt with an interesting aspect of Texas history--the Alamo, for example).

On the other hand, Ms. Cargill did not lecture or make presentations, as did the Cityside social studies teacher, Mr. Franklin. Instead, she gave the students a regular supply of handouts and worksheets to be done during the work time she periodically allowed in class. These "units" would form part of the "notebooks" that the students were to keep, and which were turned in periodically and graded by Ms. Cargill (the students were graded only for completing the assignments, not for answering the questions correctly--though they were not told this).

As already mentioned, however, the units were not simply drawn out of the textbook. For example, Ms. Cargill also used a locally developed "Texas Heritage" unit which required students to do research on and construct reports about different apects of their communities (e.g., to interview the oldest member of the community, to find out how the community or area got its name, etc.). In addition to this, there was also a more formally organized research report which required the students to select a subject having to do with Texas history and write a report using footnotes and library sources (the class spent three days working in the library on this paper). Such assignments would often be spread out over a period of a week or more, and the students would be responsible for keeping up with the work and getting it in on time.

Ms. Cargill thus made multiple assignments (most of them in-class work, a few primarily homework), keeping on-going assignments listed on the board to cue the students to those which were due or soon to be due. At the beginning

of class she would review this list and key the students to the assignments they most needed to spend time on.

Perhaps the most distinctive aspect of Ms. Cargill's style of instruction, however, was the manner in which she presented and reviewed information: what she called her "discussions." These were complex events used both to introduce and to review subject matter and assignments. In essence, Ms. Cargill led the students through concepts and facts by way of dialogue, allowing students to ask questions, raise issues, or recount personal experiences putatively relevant to the topic under discussion.

What Ms. Cargill Said About Her Teaching

Ms. Cargill's primary subject matter was Texas History, but unlike the history teachers at Countryside she did not define "history" in terms of what was written in the textbook. When asked what she thought students should learn from the course, she replied:

> I think they need to gain an appreciation of the state. There's such a variety in the state. When you think of geography--the different land forms that are here. And there's a lot of color: there's a lot of different kinds of heroes, battles, and each contributed to the state. And I hope that they sense, somehow, an appreciation of what's gone on in the state.
>
> INTERVIEWER: WELL, WHAT GOOD WILL THAT DO THEM?
>
> Probably just make life a little more meaningful--maybe not now, maybe a little bit later. . . . If [the students] are college bound, it's the first kind of survey course they take, where they cover a lot of material in a short length of time. They get an exposure to a little bit of note-taking, a little bit of research.

These last remarks were related to Ms. Cargill's experiences as an 8th grade American history teacher. That is, she tended to look on the course as the first in a general sequence of history courses that the students would encounter all the way through high school:

> [Texas history] sets a sort of framework for history . . . Having taught American history [the 8th grade course], I think Texas history should very much be a framework that other histories can build on. . . . I tell

them, you know, you're going to hear this all through even high school. ...The only way you really know whether they have learned more is if like next year they can reflect on some of the things they learned this year.

Thus, what the students learned in 7th grade Texas history was seen as valuable essentially in terms of how it fit into the sequence of learning experiences the students would encounter--beyond that, the course was primarily a matter of familiarizing the students with the major "heroes and battles" that had figured in the state's history (there was one broad exception to this--the government unit--which will be discussed below).

This is not to say, of course, that the textbook was unimportant. For example, as we shall see in more detail below, Ms. Cargill felt strongly that discussion and semi-research activities were the best ways for students to learn. But at the same time, she felt her ability to pursue such activities at length was quite limited:

> I think students learn more in doing activities. It's putting knowledge to work, is what it is. And that's when it really becomes a part of them. But you get caught in that thing--you don't have enough time to do that, because you're so tied to a curriculum. You may not have to cover that whole book, but you've got to cover the main facts in that thing.

It was not that she had to follow the book line by line, question by question (like the history teachers at Countryside). Rather, the textbook defined the topic areas she had to deal with and the sequence in which she had to deal with them. By defining the required topics to be covered, the textbook also insured that it would be adhered to to some extent, for as Ms. Cargill pointed out, it would be too much work for her to develop enough materials to replace the text--besides which she believed that students, parents, and administrators would complain about the lack of a text if it were not used. This is not to say the Ms. Cargill thoroughly disliked the text. Rather, she felt it was simply too difficult for the students.

> Since it is the only textbook we have, it has to be used. . . . It's good in that it does have a lot of material, and there's enough in there to sort of pick and choose. You're not wondering, "Oh, gosh, am I going to

> have enough material?" It's not that kind of thing. . . . The chapter questions are too detailed, but I don't use them anyhow.

What Ms. Cargill did, then, was to use the text as a sort of repository of materials, a base upon which she built her activities, though she accorded it little explicit attention in class. Thus, instead of using the unit questions in the book, Ms. Cargill wrote her own, drawing on her experience-based knowledge of the best way to write worksheet questions for 7th grade history students:

> We start out with questions because 7th graders can't handle a term, you know: "What am I supposed to do with this?" So we start out with questions, and then I finally graduate to terms. . . . Instead of saying, "Who is Sam Houston?" you would just put, "Sam Houston." And the student would know, you know, "Give me the importance of this man . . ." But if you start out at the beginning of the year with that, they will copy down the sentence that has 'Sam Houston' written in it. So, you sort of have to train them what to look for.

The written work, however, was the last stage in Ms. Cargill's system of instruction. The first step, and for her, the most important step, was the "discussion" of a topic. In general, the discussion corresponded to the first full lesson on a topic: a reading in the text would have been assigned and the discussion would be used as a means of indirectly previewing it (i.e., keying the students to the most important topics in the text, and giving them a rough overview of what is said about those topics--Ms. Cargill said that the discussion was also intended to help those who are poor readers) or reviewing it (for the better students who actually used the text):

> If I asked a question, they have to think about what the answer might be; whereas if I give them the answer, there is no thought process the student needs to go through. And he needs to be motivated in looking into that textbook to see if there might be some answers to some things he might want to know, not just what he has to know.

The discussion was thus really Ms. Cargill's way of presenting material:

> I feel like the only way that you can present material--you've got to get the kid involved with that and they really do get involved with the question-answer. Their attention span is very limited and they're going to listen to you maybe five minutes. But with questions and answers, they get quite involved with that. So that is why there are no lectures. Discussion, question-answer session, that's the same thing.

As Ms. Cargill described it, her discussions had been consciously modelled on the instructional style of one particular history teacher who had greatly influenced her when she had been a student in the public schools:

> The discussion pretty well goes back to the discussions I enjoyed when I went through social studies in school. I enjoyed the interchange with the teacher. . . . Now, some of that is dated, [but] this was rather a new kind of thing at the time. Very few teachers did that so this really made an impression on me at that time. . . . And so I always go back to this one teacher I had, and to many students she was a demon on wheels, you just never crossed her. And then I learned and I had a good relationship with her, I was not her pet, and there were some things that she did as a teacher that I would never do. But as far as how she taught in her classroom, that was good. And I guess I have pretty much the same kind of atmosphere in my classroom as she does.

In Ms. Cargill's classroom, discussions were long (usually the entire period) and wandering--since she allowed students to ask questions only tangentially related to the topic. She generally began these discussions by asking a broad question--for example, in a discussion of the Civil War: "How did slavery divide the North and the South?" Students could call out a variety of answers, but if Ms. Cargill did not hear the answer she wanted, she would either wait, ask the question again, or ask another question. Often she would accept partial answers from different students, or use a correct answer to lead into another topic. For example, the question given above about the role of slavery in the Civil War led into a long discussion of the meaning of "states' rights." Ms. Cargill's own account of her discussions corresponded well with the way she actually ran them:

> They [the students] pretty well know me by now, that they know when they've hit the right one; and if I keep asking that means nobody's come up with the right answer. I won't say, "no, no, no, no" but if I keep asking, they'll keep thinking . . . or guessing.
>
> INTERVIEWER: IS THAT WHAT YOU GENERALLY DO WHEN YOU ASK A QUESTION AND A STUDENT GIVES YOU A WRONG ANSWER? JUST KEEP GOING UNTIL YOU GET THE RIGHT ANSWER?
>
> Either that, or I will ask that student another question, to see if he realizes that what he answered was either right or wrong.
> ...

WHEN YOU ASK OTHER QUESTIONS, DO YOU TRY TO MAKE SIMPLER QUESTIONS?

> I try to stimulate thinking about their answer. Is it a simpler question? It could be, it may be breaking down that big question into something they can understand. Or starting with the knowledge . . . you start with the answer that he gives you and see if you can redeem it in any way. And lead them from that answer to maybe the right answer that you want.

This type of discussion entailed several difficulties, at least as Ms. Cargill practiced it. First, it sometimes succeeded too well in eliciting student participation. Often there were three or four students competing for the floor, as well as other students engaged in debates on the side (although these discussions were almost always focused on the discussion topic). As Ms. Cargill noted while watching a videotape of herself leading a discussion:

> There were several of them trying to answer. I have a real problem with that. You know, you like sponteneity and then it just gets out of hand, and yet you lose the train of thinking sometimes if you don't let it roll.

A second problem with the discussions was that the very looseness of them, while encouraging thought and participation, reduced Ms. Cargill's control over them--a condition which gave rise to many "extraneous" discussions. Thus, for example, while discussing the constitution a girl in the class asked if the president of the U.S. could marry a foreigner. Ms. Cargill, as usual, came back with a question: "Is that covered under the constitution?"--to which the girl replied that the constitution said the president couldn't accept gifts from foreigners, and that in some places a wife was considered a gift. This, in turn, led to a slight detour in the discussion. On another occasion, a question about "checks and balances" in government produced a series of bizarre teacher-student exchanges until it became clear that the students understood the phrase to apply only to bank cheques and bank balances--which pushed the discussion towards a consideration of the meaning of the term "check." These sorts of detours were not necessarily "problems" but they were irritations. Ms. Cargill, however,

was adamant about the importance of staying with the questioning method. She felt that the students would be only too happy if she were to begin lecturing and drop the dialog style of interaction:

> They're very unsure about maybe the little bit of knowledge they do have. They just have no self-confidence at all.
>
> INTERVIEWER: IS THERE ANYTHING YOU CAN DO TO ENCOURAGE THAT SELF-CONFIDENCE?
>
> Well, you don't encourage it by giving them answers. And that's what they're continually just asking for--just a blanket answer. And I usually encourage it by asking questions to where they can finally come up with their answer. That's the tediousness of this teaching.

Finally, Ms. Cargill was aware of the possibility that the discussions tended to favor the more loquacious students.

> I think other students learn from discussions, but you really have to be careful with discussions that just the same people aren't in those discussions all the time, and that's why I go back to individual work because, four people can handle a discussion and you really feel, oh boy, this class really knows this material, and what you haven't realized is that about 15 of them haven't done anything, and it isn't until they do the individual work that they've learned anything.

The discussions, then, were important ways to motivate students to take an interest in the subject matter, a way to review the main points of the text for those students who had done (or were likely to do) the assigned reading, and a way of providing information to those students who either did not or were not able to read and comprehend the text. In Ms. Cargill's own conceptual scheme, however, it was the "individual work"--the written work using the handouts and worksheets and tests that she prepared--which was crucial for insuring that the students were learning something. As she explained:

> They do not learn unless they do something with the knowledge that they have either read or have been questioned about or that we've had discussion on. They've got to do something with it. . . . I've always believed that they learned best when they wrote something down.

This written work was not entirely made up of the "identify" or "define the term" sorts of questions described earlier (although these did play an

important role). There were also, for example, true and false questions, and inference questions (e.g., "How could a book, Uncle Tom's Cabin, be a cause of the Civil War?"). This individual work was generally assigned to be done in class, where Ms. Cargill would serve as a resource, walking around the room giving individual attention, or, more frequently, sitting at her desk and catching up on paper work (though she was available to students who needed help--they were allowed to move about the room as ask her for help, and there were a number who always did so). As Ms. Cargill explained, she had once attempted to have the students do the written work at home--to free the classroom time for more discussion--but this had not proven practical,

> They're not doing as much homework. . . . If you could assign more material, more reading and answering of questions at home, then maybe you could say, "Okay, let's use this information . . . " [But the students] lose it [the homework], it never gets to class. It's a hassle, and you can put zeros down, and it doesn't phase them. . . . I don't know what they do in high school about [homework]. I know 8th graders do not do it. And that's where I got my clue: when I realized 8th graders were not being assigned homework I thought, "Well, why hassle it?" . . . And I know why others don't do it, it's for the same reason that I quit hassling it. If you're constantly trying to get that homework to class, it would take constant calling home. You don't have time to do that.

Ms. Cargill's practice of keeping to her desk and catching up on her paperwork while the students did their written work was also a way of dealing with some of the "hassle" of teaching:

> Somehow I've got to keep my sanity, with all of the work that's required and I've got to have some time at my desk. Now, that doesn't mean that they can't come up and ask me [questions]. I can still give directions, and if I see something happening that I need to explain I definitely will do that. [But] . . . If I'm circulating, they [the students] feel like that have to ask me something.

Once the individual written work had been done, the students would exchange it and it would be checked in class (except for major tests, which Ms. Cargill still graded herself). In the past, Ms. Cargill explained, she had simply graded the papers and made the students correct them, now she gave the students the correct answers as the work was graded in class:

I used to have them look up their corrections, make them find the right answer. Well, I found that that penalizes the student that has missed the most. And he's wasting a lot of time on things I'm not going to test on. And yet I think there is a value in correcting mistakes, and so this is why I don't have them spend any time looking for the answers. I give them the right answers, but I make them write them out. They can't just put the letter down. And it does not change the test grade, but it is worth points in their notebook grade.

There was, however, one exception to this rule: the government unit. This was a unit, unrelated to Texas History (it used a different textbook altogether), which focused on the structure and functions of the Government. Ms. Cargill spent about the last month of the school year on this unit (note that 7th grade social studies at Countryside had no such unit), and felt it to have more general relevance and significance for the students than Texas History:

> The government unit, I think, should be meaningful to all of them. Because in there we try to stress the importance of voting, and being a good citizen. . . . So maybe <u>that</u> part of Texas History and government would be important to them.

The greater importance of the unit in Ms. Cargill's eyes led to a different strategy of instruction: once again the students read, discussed, and did written work. However, they were also required to correct their mistakes on the written work by themselves (a practice which Ms. Cargill hoped would result in a better understanding of the material):

> Well, all year, whenever I gave a test back I would just give them the answers of the whole test and have them write out the ones that they missed with the correct answer--mainly because we never covered that material again and I didn't want to waste a lot of time on material I was not going to cover again. But this government unit is different. I'm going to ask it again and again and again, so this time, when I gave the test back to them, I said, "I'm not going to tell you what the right answer is. You're going to have to find your answer, and I want you to correct it and turn it in, turn it back to me. And I checked their corrections. And I still got wrong answers and I sent it right back to them and said, "mark it wrong." I said, "find the correct answer." And I'm hoping that they've learned a little bit more doing that than me just saying, "Well, the presiding officer of the senate is the vice-president."

Once the students had done the written work, it was to be kept in a "notebook" that Ms. Cargill would periodically take up and check. As she

explained, she was not concerned with the accuracy or correctness of the student work. Instead, the notebooks were a strategy towards achieving an underlying goal of the course: teaching the students "organization" and "self-discipline":

> I have them keep notebooks mainly so that they learn organization. Now they may not realize that they need that, but I feel if I can somehow help that student organize in seventh grade, in seventh grade he has learned a skill that will carry him through the rest of his school years. . . . I do not grade it for accuracy, I mean as far as having each answer correct. It's purely organizational.

What this meant in practice was that the students didn't get credit for the work if they couldn't keep it organized. Here, for example, is Ms. Cargill's comment on a portion of videotape in one of the stimulated recall interviews:

> Here I have to make a decision. Some fellow lost his two papers from yesterday and so--I'm trying to teach responsibility--so I said, "Well, if you can't find it, it's a zero."

On the other hand, the notebook keeping/organization activity could also be seen as a way of insuring that students--by simply doing the work, whether rightly or wrongly--could pass the course. In part at least, this practice was linked to the fact that Ms. Cargill's history class (unlike, say, the Reading and Math classes at Middleburg) were very heterogeneous in terms of students' tested ability:

> If [students] are in Title I reading then usually they are put in low level English also because that usually ties together. Now, evidently they give another math test. . . . Then when it comes to Texas History they sort of decide does the student have good work habits, does he try to do his work? And that's one reason why in my Texas History I keep a notebook. That's nothing other than keeping the material and turning it in and even the lowest of low students can pass Texas History if they do that. And so its one of the built-in things I have.

Thus, the notebook keeping activity, like many of Ms. Cargill's practices, was a way of achieving belief-based goals (in this case, teaching "responsiblity") within the constraints of a particular work context (the constraints of presenting certain topics to students with varying levels of ability and interest).

Ms. Marsh: A Countryside History Teacher

At the time of the TBS study, Ms. Marsh had been in teaching for 8 years, and had spent the last 5 of those years as the 8th grade history teacher at Countryside school. Although she was a history teacher, Ms. Marsh was not an athletic coach, and recognized that for this reason she might one day be asked to move to another subject matter area in which she was certified, such as math, in order to make room for a coach. She regarded this prospect with equanimity, though she said that history was her favorite subject to teach.

Ms. Marsh explained that she had decided to be a teacher in the 8th grade--not to teach anything in particular, but simply to be a teacher:

> In eighth grade I knew I would be a teacher. . . . I knew I would have to be doing something with people and that was the best choice. I guess my girls' coach in junior high and high school was the biggest influence. I thought I would be a P.E. coach, but when I dropped my knee out, then that changed. But I still knew I'd always be a teacher. It doesn't matter what I teach. . . . I've taught everything . . . I started off in fifth and sixth grade math and science, and then I went to sixth grade social studies, geography and English, and then I came here and did seventh and eighth grade Texas history and American History, and now that I've been here I get just American History.

As we shall see, this commitment to <u>teaching</u> in general rather than the teaching of a particular subject matter field had important consequences for the way Ms. Marsh taught her classes.

<u>Ms. Marsh Talks About Her Teaching</u>

Like Mr. Larson, the 7th grade social studies teacher at Countryside, Ms. Marsh had students read from the book, though in her class they read one paragraph apiece (two paragraphs if they so desired), rather than the two sentences Mr. Larson allowed, and Ms. Marsh herself would occasionally read one or more paragraphs from the book. According to Ms. Marsh, this was not a standard practice (and in fact she did not use this oral reading format in all of her class periods). She claimed instead that the practice was a response to the needs of her students:

> I just feel like it's necessary to read because our reading skills aren't good. If I could get back to the reading skills that I had, like 2 years ago, I had good readers . . . we could skip some reading sections. And even 3 years ago, I could say, "Read it on your own." But I can't with these kids that I have this year. I couldn't with last year's. If I said "Read it on your own," they'd laugh and slam the book shut.
>
> I don't ever say, "read it on you own," because to me, the kids understand it when they hear it. Not as much as when they read it. Our reading comprehension level is low in our school. So, to me, it is the oral. When they hear me read it or they hear another voice reading it, and they're reading it along, then it sinks in. And too, for those who aren't paying attention, at least hearing it orally is going to perhaps trigger them later, you know, because we don't all pay attention all the time. So that will help those that have veered off and are day dreaming at the moment.

In addition to having the students read aloud from the text, Ms. Marsh occasionally led them through sets of written worksheet questions as they read. That is, the students would be given worksheets with questions relating to the unit they were about to read. Then, as the unit was read aloud, Ms. Marsh would interrupt whenever information relevant to a worksheet question appeared in the book and would explicitly point out the connection to the students. The same procedure was used when the students were assigned text questions: Ms. Marsh would cue the students to some of the answers to the questions as they read the text.

There seemed to be two reasons for this practice. One was the sort of grade-buffering that was common among the history teachers in the study (and one of the English teachers: Ms. Richards). That is, the work system was set up so that the students could pass the course by merely doing some very routine and simplistic work. As Mr. Marsh put it, describing the use of the worksheets, "that way I'm guaranteed that they're going to do well when we grade it. It gives them a feeling of achievement." Once graded, the worksheets and text questions were to go into the students' notebooks (where the students would get a grade for having them completed) and were to serve as aids in reviewing for tests (the tests would be constructed from items on such

worksheets). Finally, the second reason for this system was that it was thought to help motivate the students to like history. As Ms. Marsh explained:

> So they're walking out of here with that good feeling [that] even if it's homework, it isn't a drag. And even it it was classwork, well, she gave us half the answers in class--you know, it was easy. So it builds this idea that history is not a drag, homework is not a drag, even classwork is not so bad.

This system of instruction, which resembles Mr. Larson's in the bare bones of its outline, stems from some very interesting positions. Consider the situation: a teacher has the job of imparting the information in the textbook to the students--but the students can't or won't read the textbook. There is a "translation" problem: how do you put the information into a form in which the students can understand it? Ms. Marsh's solution appears to be a simple one: she had the textbook read aloud. To the extent that this was the case, the information was not substantively transformed, it was simply recoded into another medium (sound). This also, it should be noted, allowed Ms. Marsh to drill the students on their reading skills--not an unimportant fact, for as we shall see, she thought of her teaching responsibilities as extending beyond the teaching of history. In any event, however, the read-aloud format created its own special social participation problems. It made it difficult, for example, for Ms. Marsh to monitor the class while at the same time helping along her many struggling readers:

> It's difficult because with kids that are not good readers, if I'm watching the class and not watching my book and they get to a word they cannot pronounce, then I'm in a bind to find out what word they are stumbling over. And that happens a lot, if I'm up and watching. . . . I try not to interrupt the reader with verbal things, but most of my discipline is done silently or just with eye contact. Or if I just look at them and stare at them, they'll look down and look at their book, so I do that a lot, too.

Another sort of problem with the read-aloud arises from the fact that it is difficult to monitor the students' comprehension of what is being read.

Ms. Marsh tried to deal with this by frequently interrupting the reading to ask questions related to the material that had just been covered:

> There are lots of times when we have just read a sentence or two or a paragraph, and I come in and I will ask--the word was defined within, the whole concept was right there in black and white--and I'll come back, and I'll say "What was so-and-so?" And I'll get this blank silence. And that tells me they're not listening. I say, "Look again, look again at the paragraph that was just read," and I'll repeat the question. . . . Unless I make that effort to go back and review what they just read . . . they're off daydreaming, thinking about other things, doodling on their paper.

As this statement would suggest, Ms. Marsh's use of the text was not as passive as Mr. Larson's. She broke into the chain of oral reading quite often to emphasize aspects of the events or concepts being addressed in the book or to link the text-content then being studied to content studied in the past or content to be studied in the future. On occasion, as in the following illustration drawn from fieldnotes, this entailed fairly elaborate manipulations of the text.

> "Now," Ms. Marsh says, "continuing where it says "Free Blacks" on page 252." Dorothy [a student] begins to read ... The girl who sits behind Dorothy reads after Dorothy finishes. This is what they read:
>
> > There were about 250,000 free Blacks in the South. Various legal regulations placed them at the bottom of the social scale. Southern Whites regarded free Blacks with suspicion. Even if the Blacks kept to themselves they were a threat, for their very freedom made slaves envious and inspired uprisings.
> >
> > As a result the position of free Blacks deteriorated rapidly as slavery fastened itself upon the South. Free Blacks were required to carry passes when traveling. They could not possess weapons or assemble in groups. They could not testify in court against Whites. And, although taxed, they could not vote. State laws made the freeing of slaves extremely difficult, and newly freed persons were usually required to leave the state.
> >
> > Such regulations clearly made free Black people second-class citizens. Unwanted in the South, many might have moved to the North, except that conditions in the North were not much better. When one wealthy Virginian freed his 300 slaves and financed their way to Ohio, Ohio would not let them in.
>
> When the students finish reading, Ms. Marsh breaks in. "Okay," she says, "When we talked about slavery before, we talked about the rules and laws that regulated slaves. They could not have jobs, they could not have weapons, they couldn't leave the plantation without written permission from their owner. There were all these rules, what were these

rules called?" At first there's no response and then someone timidly calls out "Regulations?" "That's what they were," Ms. Marsh responds, "but what was the name for them?" She pauses again, then supplies the answer: "Remember slave codes? Now, after the Civil War we're going to see that there remained rules and regulations for free blacks and these were called Black Codes." Ms. Marsh continues, "Now, who was the slave responsible to?--His owner, okay, now what were the reasons the Civil War was fought?" Several students call out the answer: "To free slaves." "Okay, okay," says Ms. Marsh, "The Civil War was fought at least in part over slaves, and what happened to the slaves after the Civil War?" She pauses, and several students answer that "they were freed." "Alright," says Ms. Marsh, "now hold your place in the book here and go to page 470 in the back of the book." She continues as the students turn the pages: "When we say 'free' we have certain thoughts about free, don't we? Okay, Now we're gonna look at Louisiana and see how Louisiana interpreted 'free' and we'll see if we agree with it. Now," she says, referring to the book, "In Louisiana they don't have cities or towns, etc., they have what are called parishes." Ms. Marsh then begins reading some parish codes written on page 470. When she finishes she asks the class: "Is that freedom?" The students answer in chorus: "No." Ms. Marsh asks: "Who was the free Black responsible to?" The students call out: "His employer." Ms. Marsh reiterates this: "His employer. A slave was responsible to his owner, a free Black was responsible to his employer. Is there any difference?" The students call out that there isn't . . . "Now," Ms. Marsh continues, "Black codes were what?" The students call out that these were regulations designed to control the Blacks. "And what were some of the Black Codes?" The students begin calling out what some of the codes were, and Ms. Marsh herself begins providing some.

In other instances, Ms. Marsh would foreshadow what was about to be read in the text by briefly summarizing or paraphrasing the content of the next paragraph in the book. When she sensed that the students were not understanding the text she would use analogies to illustrate the situation, as in the following example, where the text had been concerned with the British blockade of American ports prior to the War of 1812:

> "I'll give you an example. Say Nancy [a student in the class] isn't supposed to come into the room. I won't let her. So what she does is she pays Sally [another student] to bring her things into the room. Is that fair?" Several of the students say "No," they don't think it's fair. "You don't think it's fair?" says Ms. Marsh, "Well, that's your opinion. America is carrying goods for England and France. And England is searching the American ships and not letting them transport the goods to France. Now the English thought, I guess, that it wasn't fair for the Americans to take goods into France in the first place. You don't think it's fair for Sally to bring in things for Nancy, but Nancy thinks it's fair, and Sally's getting paid for it and she thinks it's fair. You don't think it's fair, but that's just your opinion. In the same way the French thought it was fair to get things. And the Americans who were getting paid to transport things for the French thought it was fair too.

> The Americans felt that it was very unfair for the English to stop their ships and search them. But you have to ask yourself was it fair, was it not fair? Was it fair for the Americans to be transporting the goods in the first place? It's your opinion. If you're getting paid to do it, it's fair. History is opinions. It's what do you think? And you've got to watch out.

To some extent, what was happening in these instances resembles the type of "textbook performance" that will be seen in the classrooms of the the math teachers in the study. That is, the "translation" of the content was not simply a written medium to spoken medium shift, it was the embodiment of the text matter into concrete illustrations and examples geared to what the teacher believed the students' levels of interest or comprehension to be. By framing the historical situation in the details of the recognizable, everyday situations of the students, and having the students think through the pros and cons of the situation, the teacher was, in a sense, demonstrating the "procedural" use of the historical knowledge (as opposed to trying to lead the students to a "declarative" possession of the knowledge. For the procedural/ declarative distinction, see Winograd, 1975; Rumelhart & Norman, 1981.).

However, this situation leads to a curious implication. In mathematics, the procedural orientation is not surprising because we are accustomed to thinking of the subject as consisting more of abstract formulas and heuristics than of substantive instances or concrete applications. In history, however, there is sometimes a tendency to think of the subject as consisting of sets of statements, propositions or facts about actual events in the past. Ms. Marsh's instructional system, insofar as it embodied what is being called here a "procedural" orientation, was teaching history not as statements about events, but as a way of thinking about statements about events. Indeed, although Ms. Marsh drew heavily on the textbook and generally thought well of it, teaching the students to be skeptical of the text seemed to be a high priority:

> I teach the kids that [the textbook] is not totally factual. It is the opinion of the authors. History is just the opinion of people and I constantly teach that to them, and that just because it's in the book doesn't mean it's right. There can be errors in the book, there can be misinformation, there can be opinion.
>
> Unless you were there and saw it yourself, you have to take everybody else's word for it. So, everything we hear is hearsay. And how valid is that guy that recorded it? What was his slanting when he wrote it? . . . So, I tell my kids, "this history class is the opinion of these authors and the opinion of this person." I said: "We could pick up a different book and get a different opinion of history. So always be open. Do not take this as the gospel truth. It is not verbatim, it is the opinion of these authors.

This attitude was actually quite related to a perspective shared by the history teachers at Middleburg and Cityside: the belief that it was pointless to attempt to teach the "details" or "facts" of history in the 7th or 8th grades. As these teachers acknowledged, junior high history classes are really the first steps in a sequence of history courses continuing into high school. What one should do in junior high history, then, is to prepare the students for these later experiences. Ms. Marsh, and Ms. Cargill and Mr. Franklin at Middleburg and Cityside respectively, were all engaged in this activity, though in very different ways. Ms. Marsh, when asked about the significance of the content she was testing the students on, was very specific about her position

> It is important to know George Washington, Thomas Jefferson and Abraham Lincoln. And after that, who cares?
>
> INTERVIEWER: WHY TEACH ALL THE OTHER STUFF, THEN?
>
> To give you background, to make you ask questions. To make you see how we got where we are, filling in the blank space. . . . When they get to high school, they're gonna fill [in the] details. I'm just giving the brackets now. I'm giving the number one and the A. When they get to high school, they're gonna get the small "a's" and "b's" and all the rest of the details, so if they have the basic overall view, then the little pieces are going to fit into place later on. So I'm really just giving the broad outlines of the stuff. . . . High school will pick up from where I left off and goes on.

For Ms. Marsh, then, the primary function of 8th grade history was to provide the students with some meta-knowledge about history and history

texts--mainly the fact that the texts were not infallible and that historical arguments represented the opinions of interested parties--and whatever few basic facts it might be possible for them to acquire. From this perspective, then, the close attention to the texts implied by the read-aloud format was in large part a way of focusing the students attention on it so that Ms. Marsh could show them how to manipulate it or question it. At the same time, the worksheet activities and tests seem to have been, in part, ways to make the students attend to the text, and in part means to satisfy administrative demands for testing with a minimum waste of time and energy. As Ms. Marsh explained, referring to her 100 item final test in the course:

> I have to do that. That is for paperwork. That is to satisfy parents as to why so-and-so failed. That's for records, record-keeping. You really can't tell if you have taught the child because kids who have not learned anything can pass the test. Kids that know things can't pass the test. So a test is not a good evaluation, but I have to give them. The only way you can tell if the kid has learned anything is to sit down and talk to them . . . I would much rather be in a non-grading situation. . . . I have been, and it's more satisfactory because you really know the kid knows something then.

The last comment in the quote above harks back to the fact that Ms. Marsh's first teaching job had been in a Catholic private school in the city of Morton which had used both ability grouping and nongraded accountability systems (both systems of teaching she strongly espoused).

More generally, Ms. Marsh's career status was very important to an aspect of her teaching--or rather, her relationship to her pupils and the community--which has not yet been mentioned. For Ms. Marsh, one of the fundamental aspects of teaching--perhaps <u>the</u> fundamental goal--was to build character. In this regard, she distinguished herself from most of the other teachers:

> I don't think that we have enough . . . inspired teachers . . . to inspire the kids and to get them in the directions that are best suited for them. I think we're not teaching children, we're teaching history. . . . That is the precept of many other people here. They don't feel that they are teaching children. I disagree. I'm not teaching history. I told one class at the beginning of the year: "If you don't learn any

history, I won't be as upset if you learn not to be rude, and learn manners and learn behavior," I said, "I would be just as happy." . . . I was amazed when I got to school and teaching at how many kids didn't have manners. And it upset me. And I felt like "These parents say that it's your job and you've got them during the day, so you make the changes." So, I said, "I accept the responsibility."

I'm trained to build people. I'm trained to build these kids into something, and just teaching them history isn't the way to do it.

They are [my kids]. They are a part of me.

INTERVIEWER: THEY HAVE FIVE OTHER TEACHERS DURING THE DAY. WHAT SORT OF IMPACT OR INFLUENCE CAN YOU HAVE ON THEM, EXCEPT FOR THE 50 OR 45 MINUTES THEY ARE IN YOUR CLASSROOM?

I feel like I have a greater impact on them . . .

INTERVIEWER: THAN ALL THE OTHER TEACHERS PUT TOGETHER?

Oh, I don't know about that, I'm not that good.

INTERVIEWER: THAN ALL THE OTHER TEACHERS INDIVIDUALLY?

Yes. Yes, perhaps that. I think I'm saying that. I care about these kids, and they know that. I respect their ability to disagree with me, to argue with me . . . they can complain to me. And I don't lose track of them once they graduate from here. I watch them all the way through high school, and I watch what they have achieved, and I congratulate them. I send them notes and when they're hurt on the football field, I call the hospital. And that's because they're my kids, and they know they are. They know they are. You can ask anyone of those up there at the high school and they can tell you.

This perspective--and other aspects of Ms. Marsh's teaching practices--can best be understood by examining Ms. Marsh's career pattern, and her place in the Dewey community.

Ms. Marsh had settled in Dewey and had made a long-term commitment to living in the area. She and her husband (who also worked for the school district) owned land in the community and had no plans to move. Ms. Marsh was also content teaching junior high school history. History was her favorite subject area and she preferred working with junior high students as opposed to elementary students because the former were better able to carry on "mature" discussions. Ms. Marsh thus consciously set herself off from the transient

teachers (who were "in it for the money" as she put it) who worked at Countryside for only a year or two before moving to better paying jobs. As Ms. Marsh put it: "[Teaching] is my life and I love it. If it paid half as much, I would still be here, which frustrates my husband sometimes." This commitment expressed itself in her desire, not simply to teach, but to improve the community. She often spoke, for example, of her attempts to encourage the students to set their sights high:

> When I first came here, the kids who are seniors this year, when I would ask "What do you want to be?" One of the girls told me she wanted to be a checker at the Safeway. That was her goal in life, that's as far as she expected to get. Well, the goals have been picking up every year.

Ms. Marsh was also active in the community: She taught a Sunday school class at the seventh-grade level (where she became acquainted with many of the students who would be in her classes the following year) and claimed to see her students frequently outside the classroom context. She lived near the Superintendent of schools and was well enough acquainted with members of the School Board to have two of them speak to her classes about the student dress code at the school (an encounter which resulted in changes in the code).

For Ms. Marsh, then, the context in which she saw herself operating was not simply the classroom or the administrative structure of the school, but the community of which she was a part and in whose betterment she saw herself as having a stake. She saw herself, moreover, as a stable element in an organization dominated by transient teachers less committed than she to the general development of the students. As a result, she saw herself as having more influence over the students than other teachers, and she attempted to compensate for the other teachers--for example, trying to improve the students' reading skills in her history class. Her emphasis on trying to teach the students how to think about history (rather than trying to teach them a corpus of facts) would also seem to be in harmony with this perspective.

Mr. Franklin: A Cityside History Teacher

Mr. Franklin, an eighth grade social studies/American history teacher at Cityside, had taught in the Morton district for about 10 years: first at the high school level, and for the last 3 years at Cityside.

Mr. Franklin had not originally trained to be a teacher. He took his undergraduate degree in a liberal arts field and after a stint in the armed forces entered business school. There, taking management courses, he became convinced that he most enjoyed "structured interaction" and "talking about thinking," and with the encouragement of one of his business professors switched majors to education. Mr. Franklin thus entered teaching in his late 20s--a factor which he felt contributed significantly to his smooth entry into the field. He said that he had not experienced any difficulty in managing his classrooms or maintaining order (something he said seemed to bother the young teachers just out of college that he had seen or worked with as a cooperating teacher).

As already mentioned, Mr. Franklin began teaching social studies at the high school level. The first school he worked at served the poor, minority areas of the city, and Mr. Franklin had problems adjusting to the setting. He felt that many of the students lacked respect for themselves and their social groups, and had very limited educational goals. He quickly became disenchanted with teaching. Another factor contributing to this dissatisfaction was the administrative climate at the school he worked in: He had conflicts with the administration and felt the principal in particular was hostile. As a result, Mr. Franklin soon left teaching. He worked in a self-employed, noneducation occupation for about 2 years, then decided to try education once again, this time as an administrator. He returned to college and obtained an administrative certificate.

Returning to Morton, Mr. Franklin found that no administrative jobs were available, so he went back to the classroom (at the high school level again),

hoping to enter an administrative position at a later date. The school he was assigned to served a different student clientele and had a much more positive administrative climate than the school Mr. Franklin had been assigned when he first began working in the district. Though Mr. Franklin liked his new position he was ultimately forced to leave it because of enrollment shifts in the district. His next move took him to the junior high level at Cityside. While Mr. Franklin still hoped to move into administration, he was reasonably content with his position at Cityside.

Mr. Franklin planned his instructional routines in great detail and with great explicitness. His curricular objectives, and the activities the students were to do to reach those objectives, were written out for the entire course, and the objectives and activities for each unit would be listed on the chalkboard for the students' reference. Mr. Franklin also kept a running list of course "products" (e.g., assignments or tests for which the students had gotten a grade) on the board, and the students were supposed to keep track of these in a notebook which Mr. Franklin periodically checked. Mr. Franklin had in fact worked at writing curricular guidelines for the district (though not for this particular course) and this may have contributed somewhat to this habit of detailed, long-range planning.

Mr. Franklin's primary means of communicating the subject matter to the students was through lecturing. However, these lectures were more than monologues or verbal presentations of the textbook. Instead, they generally departed far from the text and Mr. Franklin frequently made use of audio-visual equipment-- especially slides to give the students a concrete feeling for the settings they were studying. During these presentations students were allowed to ask questions and initiate discussions. It should also be noted that, like the Middleburg history teacher but unlike the Countryside teachers,

the 8th grade history class at Cityside included curricular units which were separate from the American History units (in this case, a unit on "civics").

Unlike the Countryside teachers, then, Mr. Franklin did not treat the textbook as his authoritative repository of knowledge, nor did he structure his teaching practices around them. When the textbooks were used in the class, as in the example to be discussed below, it was usually because Mr. Franklin was trying to teach the students something about the use of textbooks: it was not simply a matter of translating the text content into a verbal form (students were occasionally asked to read aloud, though this was done on a volunteer basis and did not form a major activity, as it had in the classes of the history teachers at Countryside).

Students were frequently given seatwork assignments to do in class. These consisted of a variety of activities: doing worksheets, answering text questions, outlining sections of the book, and so on. The students were occasionally allowed to work in pairs or groups while performing these activities. Mr. Franklin also occasionally introduced special activities into the classwork. In one case, for example, the students put on a play about the Puritans. In another instance, Mr. Franklin introduced a lesson on national symbolism so that the students could act as judges for flags of countries made by a Transitional Bilingual Education class at the school, and so on.

Mr. Franklin Talks About His Teaching

Mr. Franklin felt that he had great autonomy in determining what he taught in his classroom:

> Speaking as a general rule, in the schools where I've taught, provided that my kids don't cause trouble and aren't noisy and disturb their neighbors, and I don't cause a scandal, the principal, the administration, has no knowledge whatsoever, they have no way of knowing at all, what I'm teaching. So I have absolute control of what goes on in my room. Now, if I'm doing things that are outside my curriculum area I'm at risk . . . but ultimately I have total control. . . . I worked with one guy who ordered 180 movies for one year. I don't know whether he used them all, that was a big joke in school . . . he ordered more movies than there

were school days. We used to call him Mr. Media. So, teachers can do pretty much what they want. He was a coach and his class was very orderly. . . . You have plenty of freedom, provided you don't cause trouble.

There were, it is true, curricular guidelines established at the district level, but as Mr. Franklin explained, there were no checks to see that these were followed in detail, and he felt (having written district guidelines himself) that they were intended primarily as resources: "So I use them when I think they're appropriate, and I don't use them when I don't [think they are appropriate]. And I imagine most people do that."

What this meant in practice was that the topic areas to be covered in the course were defined by the district curriculum (and, as Mr. Franklin put it, teachers strayed from these at their own risk), but the teacher had discretion over the ways in which the content could be presented (and over the aspects of it which would be emphasized). As Mr. Franklin explained: "I don't change much the content of what I'm doing, but I change the way it's presented quite a bit. The content is prescribed pretty much by the [district] outline."

As Mr. Franklin's activities entailed much more than working with the textbook, the question of how he put together or assembled these activities becomes a more interesting question than it was in the case of the other history teachers in the sample, all of whom essentially used textbook-driven activities (the Countryside teachers using oral readings, the Middleburg teacher using discussions of the reading). Experience also becomes an important element. As Mr. Franklin explained, his planning work was much different than it had been three years previously, when he first began teaching 8th grade history:

I've gotten to the point now--this is the third year I've been teaching this, almost exclusively--so I've got a fairly decent amount of material that I've got ready so I don't have to spend--the first year I was here I spent a minimum of three hours a day in preparation. That's a lot, but I didn't know what I was gonna do, so I had to read the book, and I had to . . . come up with activities that would accomplish the objectives I had for the course. I had to go and find them and make them.

After three years, Mr. Franklin had developed a large repertoire of activities, although he still altered or fine-tuned portions of his instructional system:

> I would say that on the average I probably throw out somewhere between a fourth and a fifth of what I did or change it in some way, either the presentation wasn't very successful or I'll add something.

To understand Mr. Franklin's concern about the nature and effectiveness of the activities he used, one must first understand that, like two of the other history teachers in the sample (Ms. Marsh and Ms. Cargill), Mr. Franklin's main concern was not with teaching "content" at all. As he put it:

> I'd like them to know some of the stuff. But I mean, the idea that they're gonna remember, oh, the difference between the Mogollon and the Hohokam and the Anasazi more than two months down the road is, you know--that's short term memory stuff, and it's gonna be replaced by whatever we study in the next unit. . . . I'd be a fool if I thought they were going to remember that past Christmas.

There were some general facts and concepts that Mr. Franklin wanted the students to take away from the course (e.g., the climate areas of North America), and he emphasized that the course dealt with important issues and concepts. It was not that he thought the content unimportant, it was simply that he considered it unrealistic to think that 8th grade students were going to accumulate a large body of facts in their heads about history:

> I basically think that education is a process rather than a product, and people who are real heavy into the content business seem to think that it's the product, that you have a kid who comes out of school who knows these things and I think that's false. I think that if the process works well, you have a kid who knows how to <u>do</u> these things, that knows how to use his memory . . . knows how to problem solve and knows how to do analysis and synthesis of some of the things that Bloom talks about. Because the majority of the content stuff is short term memory kinds of things and I think anybody who doesn't think that is a goose. . . . I mean . . . there are important concepts to be dealt with in the social studies, and I'm not trying to denigrate what I do at all . . . [But] if you're talking about the factual base, the idea that there is a body of knowledge that I'm going to impart to this kid and it's going to stay with him the rest of his life I think is a dumb idea.

What was Mr. Franklin's fundamental goal, then? In a manner similar to two of the other history teachers--Ms. Marsh, who wanted to teach the students

that history books were made up of opinions, and Ms. Cargill, who wanted to teach her students to be well organized, Mr. Franklin's emphasis was on teaching students general ways of acting and thinking which would have applicability beyond the immediate subject matter. As he explained:

> I think I have to be what I think is important to them. If I want to tell them that they have to be consistent, and if I want to tell them that they need to think then I need to think and show them that I'm thinking. If I want to tell them that they should learn to solve problems, then I should do it and demonstrate the things that I want them to do. . . . So I think that by far my most important function is as a model of the things that I think are important. The idea that I'm going to present the material, I think, is just coincidental to all those things, because you can just let it run over a machine if that was all there was to it.

Like other history teachers in the TBS sample (and note also the similarity to the situation of the English teachers) Mr. Franklin looked at his curriculum in terms of its place in a curricular sequence through which the students were passing. The sequence itself seemed poorly devised to Mr. Franklin: "It doesn't make sense to me," he explained, "to teach American history in the eighth grade and then not mention it again until the 11th grade. I mean, that does't make instructional sense to me." Having been an 11th grade history teacher, Mr. Franklin knew what this situation meant:

> Having been a high school social studies teacher, I know they're gonna have to re-teach a lot of this stuff. I mean the idea that they [the students] could learn from the beginning of time to the Civil War and then not hear about it for three years, and then that it's all still gonna be there: I mean, it's some sort of bad joke. You just start out and re-teach all that stuff within the first 12 weeks, then we're back up to the Civil war and then go on from there.

Clearly, from this perspective, it makes abundant sense that the teacher should be more concerned with teaching students how to reason, organize, and study, than with trying to teach them content (though, again, this does not mean that content was ignored). To provide a better picture of how Mr. Franklin did in fact integrate content concerns with non-content concerns, a

short description of class sessions from his unit on "North American Indian Cultures" is presented below.

As with all of Mr. Franklin's units, the curricular objectives for the unit were written on the board:

> 1. To locate and identify major land forms and climactic factors affecting North America.
>
> 2. To identify the major North American Indian Nations. Locate the areas in which each tribe lived and discuss how their cultures, especially their shelter and food sources, were related to their environments.
>
> 3. To describe aspects of the various cultures, compare and contrast them with our own modern culture, and predict how they will interact with later Europeans.

The students spent the first 3 days on this unit outlining a chapter in the textbook. The first day there was a discussion of outlining and Mr. Franklin then had students read paragraphs aloud from the book as he showed on an overhead projector what the outline for that passage would look like. The following extract is taken from field notes:

> [After a student has read a passage from the book]. Mr. Franklin then explains that in the part the student had just read, the author was beginning to talk about the dry lands of the southwestern United States, and that the author of the text had divided different cultures up in terms of their food sources. Mr. Franklin then moves to the topic of farming, which is one of the food sources mentioned in the book, and asks the students where farming came from: "Who were the first farmers?" Someone answers: "The Indians were the first farmers." Mr. Franklin responds by asking, "Indians from where?" And some students answer "Mexico." This is apparently something they've covered in earlier lessons.
>
> "Okay," says Mr. Franklin, "the author has divided up his discussion of the Indians in terms of their food sources, and the first food source he's going to consider is farming. So Roman numeral I is "Farmers." Mr. Franklin goes to the overhead projector where he has a transparency with his outline on it. He has a sheet of paper covering it, and he gradually moves the sheet of paper down over the course of the class, allowing the students to see more and more of his outline as he goes along. At this point he pulls the paper down so that the students can see that under Roman numeral I he has written "Farmers - Ideas spread from the South (Mexico)." "Now," he continues, turning back to the class, "you don't have to copy my exact words, but you should have essentially the same ideas that I have up here."

> Mr. Franklin then begins quizzing the kids a little about farming. For example, he asks Ted: "Ted, we talked about four things that you needed for farming. The first thing was water. Now, if it's dry land where these Indians are, where does the water come from?" Ted, after a moment's thought, answers that it must come from rivers. So Mr. Franklin moves the sheet of paper to show that "A" under Roman numeral I says "Dry lands of the Southwest--river irrigation." After making this point, Mr. Franklin tells the students that there are basically no tricks in the book, that things are going to be very straightforward, and that they can expect the same patterns to hold over and over again as the author of the book discusses different topics . . .
>
> [Another student reads from the book. When the student finishes] Mr. Franklin says to the class, "Okay, now where he stopped reading is where the book finishes talking about the Mogollon tribe. Now, when I'm reading through the book and doing an outline, I'll read a whole section about one topic and then I'll stop and fill in my outline, because I don't want to go on reading, and that way miss something. Okay, now what did the book say about the Mogollon tribe?" There is no immediate response and Mr. Franklin refers to the unit objectives on the board and says that one of the things they're to do is to locate these Indian tribes. "Okay," he asks, "where did they live?"

This sort of activity continued to the end of the class: Mr. Franklin had the students read, asked them questions (some of which required to the students to recall information covered in previous units, and some of which required general reasoning skills: e.g., why would the Indians in the Southwest have built their houses in pits), and led them through an outline of the first part of the chapter. The students were then given the assignment of outlining the next part of the chapter on their own, as homework.

The next week, after the students had produced an outline on their own, Mr. Franklin gave them a "skeleton" outline. This is part of the skeleton outline:

I. Economic Aspects
   A.
      1.
         a.
         b.
      2.
   B.
   C.

And so on.

The skeleton outline was to be used, not with a portion of the text, but as an aid in taking notes while Mr. Franklin lectured. In other words, the students were supposed to use the outlining format as a way to structure the notes that they took from the lecture. The skeleton outline would not be graded, but Mr. Franklin told the students that it should help them a lot when they studied for the test. As Mr. Franklin lectured, he would occasionally point out to the students how something he had just said fit into the outline. However, the students were not allowed to ask questions directly related to the outline.

Now, as Mr. Franklin explained in an interview (and as he explained, in less detail, to the students), the unit on North American Indian Cultures was as much concerned with teaching "outlining" skills as with teaching something about the content:

> I'm giving them this outlining assignment [because] for most of my students at this level, I've found they have not had any previous experience with outlining, and most of them don't really understand what an outline's all about . . . The predictability of the pattern within the outline is the essence of whether you understand how to do it or not. . . . I think that being able to manage material, you have to have some skills--it's important to be able to deal with things that come in different kinds of formats. . . . This accessibility of information is something that you need to learn if you're . . . going to study how to handle things. Otherwise they're just a bunch of facts that are unrelated and have very little meaning and aren't accessible.

It should be clear from the example that content has not been ignored, but at the same time content learning is not the sole or main goal of the unit (at least in Mr. Franklin's eyes). One may well ask, however, how Mr. Franklin came to the conclusion that the students needed help in something like outlining? The content curriculum was set by the district, but where did the other curriculum come from? In Mr. Franklin's case, it seems once again that his experiences as a teacher at the high school level were a crucial factor. That is, he made sense of the demands and problems he faced at the junior school level by constrasting that setting to the high school. Most

importantly, his conceptualizations of his students and the proper ways to teach them were products of a comparison of junior high students to high school students. Consider, for example, the unit on North American Indians described above. Much of the emphasis on explicitly laying out the unit objectives and developing an outlining system to focus the students' attention on the text material relevant to the objectives seemingly had their sources in Mr. Franklin's attempts to teach eighth graders after teaching high school students:

> INTERVIEWER: HAVE YOU EVER TRIED TEACHING ABOUT INDIANS TO EIGHTH GRADERS IN A DIFFERENT WAY? DID YOU HAVE THE SYSTEM WORKED OUT WHEN YOU FIRST CAME HERE?
>
> No, I had never taught about Indians to eighth graders--I had taught about Indians to 11th graders. . . . Most of them [the 11th graders] were able to handle abstractions ... and the first year I taught down here [at Cityside] I got a lot of blank stares and people who didn't turn in work and I would see that what was wrong was that they weren't understanding what I wanted them to. And I have to try to make it more concrete for them. . . . The first year I was here I didn't teach it this way and I wasn't very successful. I found that they did very poorly on this unit. So the next year I looked at what I was doing and said, "Well, how come people who're intelligent and seem to do well on the other units bombed on this one? And part of the reason was because of the way it was presented to them.
>
> INTERVIEWER: SO, WHEN YOU MAKE IT "MORE CONCRETE," THAT'S BREAKING IT DOWN INTO SMALL PARTS . . . ?
>
> That's correct, and asking them specific questions and showing them the patterns that I want. . . . The first year I just handed the unit objectives out and assumed that they looked at them and knew them. And obviously they didn't, they didn't have any clue what they were there for, they were just a piece of paper. So last year and this year I've been spending a lot of time stressing them and doing it in my review work, saying "okay, look at your unit objective" and trying to let them make the connection.

To sum up, then, Mr. Franklin's image of the curriculum and his system of activities to teach it were shaped in important ways by his career experiences, his conception of the subject matter and how it could be learned, and his perception of the place of 8th grade history in the general school curriculum.

Ms. Skylark: A Countryside English Teacher

After spending three years as the 7th grade English teacher at Countryside, Ms. Skylark was beginning her first year as the 8th grade English teacher when she participated in the TBS. These four years consitituted her entire full time teaching experience.

Like most of the teachers in this study, Ms. Skylark came to teaching by way of a long and complicated route. She had gone to college for two years immediately after graduating from high school, then had dropped out for four or five years to start a family before going back to finish her B.A. degree. While in school, she had intended to be a speech and drama teacher:

> I majored in speech and drama, and English was my minor, and I was working for a psychology minor, but I was lacking two subjects to have a complete minor. However, I did my student teaching in psychology and I loved it, and here I thought I was going to love speech and drama, and I did student teaching in that also and I hated it and I thought "Geez, I spent four years working to be a speech and drama person, and after I started doing it, I didn't like it at all."
>
> INTERVIEWER: WHY NOT?
>
> Well, for one thing I had to sit and listen to speeches all day long. I would give the kids their speech, what type of speech they needed, and I'd have my criteria sheets in front of me, and I would give them points on their criteria sheets, and I'd give it back to them, and they never improved. . . . Either you have it or you don't, and if you like speech and drama, you're going to do wonderful in it. . . . But it seems that so many kids take speech and don't take a lot away from the class, at least they didn't in mine. I was real disappointed.

After graduating with her B.A., however, Ms. Skylark and her family moved to an isolated rural area where the logistics of getting to and from town made public school teaching impossible for her. She therefore spent the next two years running a preschool for families in the area (something she claimed to have enjoyed greatly). Then, when another family move brought her into the Countryside area, she applied for and got the position of 7th grade English teacher. Unlike the other Countryside teachers in the sample, Ms. Skylark did

not live in Dewey, nor did she live in the nearby city of Morton. Instead, she lived in another small rural community in the Dewey area. She thus did not fit into the category of transient teachers at Countryside, who used the school merely as a stopping off point on their routes to better paying districts. At the same time, however, she had very little knowledge of and very few informal ties with the community.

Briefly, Ms. Skylark's class followed a fairly routine format. Spelling assignments (straight from the textbook) were made on Monday and spelling tests were given on Friday. No other classtime was spent on spelling (compare this to the situation described in the section on Ms. Richards, the English teacher at Cityside). Instead, Ms. Skylark used the majority of classtime for a fairly small repertoire of activities. The students generally began the class by spending "ten minutes" (very flexibly defined) writing entries in their journals. Ms. Skylark would assign the topics that the students had to write about (e.g., how to make a salad, describe their favorite teacher, etc.). These journals were not graded for grammar or spelling, but were instead seen as ways of getting the students to practice writing.

Once the journal writing was finished, Ms. Skylark usually began the day's lesson. During the period in which her classes were observed (a fall semester) these lessons dealt mainly with grammar (occasionally there were films -- but these also focused on grammar). These almost always consisted of the class working over a set of exercises (there was little lecturing, apparently because most of the grammar was the same as it had been in 7th grade). The students would first spend some time doing the exercises as seatwork, then, in the same class period, the entire class would go over the exercises together, with Ms. Skylark orchestrating and leading the activity.

Aside from such lessons, Ms. Skylark's English classes would sometimes be taken up with such activities as the students acting plays out of their Junior Scholastic magazine. Also, towards the end of the semester, Ms. Skylark began to structure more of the lessons around literature topics and some of the class sessions were spent in oral readings or discussions of novels or stories from the literature unit.

Ms. Skylark Talks About Her Teaching

Ms. Skylark gave the following explanation for her move from teaching 7th grade English to teaching 8th grade English:

> I felt stifled suddenly. I taught 7th grade for three years and I needed something new, and I was looking for something more stimulating. I was debating whether to switch schools, or go to high school, or what did I want to do, I didn't know. So this 8th grade job came open and I thought, "Gosh, that would be something different." It would be a little bit more advanced English, and plus I would get to do the [school] newspaper.

As the statement suggests, the move was mainly something to keep up Ms. Skylark's own interest in teaching. She put this a little more explicitly later in the same interview:

> When I start feeling the need for more stimulation, I'll move on, I'll find something new. . . . I like teaching, the kids never bore you, they keep you going, and sometimes too much. You always have to be at such a high level of energy, and if you don't have that level of energy, you lose the kids and it's a job that you always have to feel motivated to teach. You always have to feel motivated, and I like to feel that way. It makes me feel high, I guess, and I'll just have to move on when I need to.

The fact that Ms. Skylark had taught 7th grade English the year before and was teaching 8th grade English this year (along with the fact that there was just one teacher per subject matter area per grade level at Countryside) meant that she was teaching the same group of students for the second year in a row. In the main, she saw this as a very good thing, as she put great value on the existence of close affective ties between herself and the students.

> My, I was surprised. I was really happy to have the same kids again. I didn't know if I would be or not but that first day I just loved seeing

them again. It was like, Oh, old friends! And I'm really happy to have the same kids. It's worked out well. I know them and I know where they are and what they need work in. I know their personalities, what works with them and what doesn't work with them.

I already had a good rapport with them. If they don't know you, they come in the class with "Well, another teacher," you know, there's already that "She's a teacher and I'm the student," you know. And there isn't any feelings and friendships or anything there. It takes a good six to eight weeks just to get the student to really know you and to want to do things for you. I think kids want to work for you when they like you and they want to work for you.

The two general themes or principles that emerge from the statements above--the desire for good rapport and friendship with her students, and the need to keep classwork interesting and to avoid routine and boredom as much as possible--pervaded Ms. Skylark's instruction. These themes are examined below.

For Ms. Skylark, staying on friendly terms with her students wasn't simply a matter of preference--it was a key to teaching the students anything:

I found that my students work better when they like me and I like them. When they know there's a mutual "like" between us, they want to work for you, and I get much more from them . . . The more I show them that I care and I like them, the more they give me, and that's what I'm looking for.

I think kids want to work for you when they like you and they want to work for you. And, so I love it, I just love knowing the kids.

I feel a relaxed atmosphere is important. It's important to me because it's the only way I can function. I'm not a strict disciplinarian. I also like to do fun things, and I think it makes it more fun for me, [and] for the kids, and I think more learning goes on when everyone's having a better time.

This emphasis on fun and friendship was expressed in Ms. Skylark's commitment to maintaining a "relaxed" atmosphere in her classroom. One product of this commitment was that many minor school rules were not strictly enforced (e.g., dress code violations, tardiness, gum-chewing, allowing students to leave the room after the beginning of class to get materials they had neglected to bring, and so on). Ms. Skylark also dealt very mildly with

off-task behaviors, talking-out-of-turn, moving around in class, and so on (all frequent occurrences in her class). Her main method of disciplining students (she refused to paddle them or send them to the office, although these were school norms) was to move the offending student to a different seat in the room: to socially isolate the child:

> I do get irritated and I do get annoyed. And when I do get that way, it's like, "Okay, you're bothering people over there, you're going to have to be moved." A lot of times I end up moving them to a back corner chair. It's like I'm uninviting them, I'm pushing them away from the rest of the crowd.

To some extent, however, the relaxed atmosphere itself and the lack of a clear management strategy seemed to encourage misbehavior: Ms. Skylark acknowledged that she didn't know how to deal with students who refused to heed her verbal desists and did not improve upon being moved. She would simply keep moving the student to different places in the room, hoping to find the spot where the student could do least harm. Such behavior patterns, she felt, derived from the students' natural desire to seek attention. In some instances, when she felt student learning was at stake, Ms. Skylark even seemed to reward disruptive student behavior:

> I find that I need to go over the same thing sometimes two, three, four and even five times. And I don't know what the answer is to that. Sometimes maybe I'm too kind and I'm too patient. I give out that same answer, or that same explanation three, four, and five times and I'll say, "This is the last time I'm going to tell you," and I'll go ahead and tell them again. And I get angry with myself for just saying, "Well, I'm sorry, that's that." I wish I would do that but I always think, well, I want them to do it--so I'll tell them.

Much of Ms. Skylark's rationale for minimizing discipline matters and keeping the classroom relaxed and friendly seemed to stem from her own experiences as a student.

> They'll ask me three or four times. It's just amazing. But . . . I wasn't a good student in school. I mean I was, I was a B student, but I mean, I was like everyone else. I was halfway listening, halfway not listening, writing notes. I was doing exactly what they're doing. So I know exactly what's going through their mind.

I know they're not listening half the time. I know they're in their mind seeing their boyfriend in the hall. I remember too well.

Students who constantly requested repetitions were frequently viewed with sympathy:

I'm glad he [a student] asked that question. See, he had the nerve to ask it and I'm glad. A lot of times if kids get in a teacher's classroom where, at least I remember from experience, if I was in a teacher's classroom where she would have really put me down for not knowing something. I wouldn't ask. And see, he should have known that . . . and I think he knew that, but yet he had enough nerve to ask, and so I thought "Good!" . . . He's honestly missed out somewhere and too many time kids miss out in a classroom and because of fear of what the teacher's going to say to them, they don't ask her or him and then they don't learn it and then they're lost. And so that's why I went ahead and explained it again.

Again, there is a reference to her own personal experiences serving as a model with which to interpret the students' behaviors. These experiences as a student were frequently mentioned as an important source of her attitude towards teaching:

[after describing being slighted by a teacher when she was six years old]: I've had too many things like that happen to me when IU was growing up that devastated me and I thought, I'm not going to do that to anybody because I remember how awful I felt.

As suggested earlier, this attitude often led to management difficulties. Most importantly, Ms. Skylark was rarely able to complete all she had planned for a period: She and the students were usually in the middle of some activity when the buzzer rang. However, Ms. Skylark evaluated her success or failure not in terms of the amount of material she covered, but (in keeping, it would seem, with her emphasis on a relaxed atmosphere) in terms of the quality of classroom participation:

It wasn't a real exciting class, it was . . . rather subdued . . . I didn't feel any real excitement with the kids, any real excitement with anything special really taking place.

INTERVIEWER: DO YOU THINK THE CLASS WAS SUCCESSFUL IN REACHING YOUR GOAL [LEARNING ABOUT COMMAS]?

Not as successful as I wanted it to be.

INTERVIEWER: HOW COULD YOU TELL?

> How could I tell? Because they didn't snap back with the answers as quickly as I wanted them to, they were slow at getting it at times. The excitement, like I said: when kids pick up something and when they see that they're doing it right, and the answers are there for them, it's exciting, because it is faster paced: "I've got it! Hey! I know where it goes." . . . When they know it and I know they know it, you can feel it, it's almost electricity in the air.

Ms. Skylark attributed her failure to get through as much material as she intended to the second guiding theme or principle of her teaching: the goal of avoiding boredom at all costs. For Ms. Skylark, the best way to avoid boredom was to use a variety of activities and to talk a lot, to maintain the class's interest through her verbal performance:

> I will do a lot of talking, probably sometimes too much talking, and its because I have a variety of things going. I found that if the teacher isn't up there . . . directing the class, and she's given out the assignment, the kid will do part of it and then start sleeping on you ... If the kid doesn't know how to do something, he'll give up, and he'll get bored and sleep on you. I think it's up to the teacher to keep this kid alert, to keep the kid going . . . I think it's up to the teacher to kinda keep them motivated, and interested.
>
> If he [the student] is bored or disinterested, there's no way he's going to learn anything. . . . You've got to keep him interested and he's got to want to learn or he's not going to.
>
> I've found that the more talking I do, the more they seem to learn. I like to get a lot of student responses. I like to say, "and what's the answer to that?" and get everyone's answer. It's noiser that way, but I think it's more stimulating.
>
> I talk a lot, use a lot of stories, a lot of remembrances if I can remember. . . . I love a variety of activities. The more activities I can find, the happier I am. I don't like to be bored. I don't think they like to be bored, especially in eighth grade. Most of the time they're so jumpy and full of enthusiasm, and "What do we do now, what do we do next?" You've got to meet that enthusiasm by giving them a variety of activities.

As the last quote suggests, Ms. Skylark was concerned with keeping her own interest at a high level as well as that of the students. She did this by generally overloading class time with activities and taking on the burden of

leading all activities herself. In an environment with a minimum of routinization and a system of management based almost entirely on her personal charisma, such practices led to large numbers of what Kounin (1970) referred to as "thrusts," "dangles," and "flip-flops." Ms. Skylark was forced to constantly shift the focus of her attention and energy to repair the unravelling threads keeping together the "perilous equilibrium" of her classroom.

While Ms. Skylark consistently stressed the goals of maintaining a relaxed atmosphere and avoiding boredom (and acted in ways comprehensible in terms of these goals), they were not her only aims. It would be incorrect to conclude from the foregoing presentation that Ms. Skylark was merely interested in keeping her classroom pleasant and entertaining. She was also trying to teach a particular body of subject matter. Thus, for example, when asked about the "goals" of particular class sessions (during the stimulated recall interviews), Ms. Skylark always framed her answers in terms of subject matter skills:

> My goals today are . . . I want them to be able to recognize the difference between just what a clause is, and a sentence . . . I still get clauses instead of sentences. And so I thought, "Well, we'll just work on that some more." And then I wanted to work into what simple sentences, compound sentences, and complex sentences are, so that they can be able to look at a sentence and say, "Oh, this is a complex sentence, it consists of a dependent clause and an independent clause."

However, these subject matter concerns were goals of a particular kind. Like the other English teacher in the TBS sample (who, incidentally, had also taught 7th grade English before become an 8th grade teacher), Ms. Skylark did not see her purpose as that of transmitting a well defined set of skills, or a body of substantive propositional knowledge. Instead, the 8th grade English curriculum was viewed as one more setting in which students would be presented with content that they had begun to encounter in grade school and would

continue to encounter well into high school. It would perhaps be better to speak of junior high English teacher (at least as exemplified by the teachers in this study) as a matter of "exposing" students to a trans-grade level curriculum, rather than as a matter of transmitting or inculcating any particular body of knowledge. This is not to say that the teachers would not have been happy to have the students learn the subject matter once and for all. Rather, it was a matter of expectations:

> You always wish they would, but this was the goal last year too [i.e., having all the students learn to recognize sentences and differentiate among types of sentences], of course. And you reach the goal with some of them, but you only gain a little bit each year. You know, you're idealistic, sure you'd love to reach this goal and say every kid in the room has learned to be able to tell me what a complex sentence is and what a compound sentence is, and every kid in this room can do this or that--but you don't. You catch a few here and a few there . . . They'll work on this till they're seniors in high school, they really will. . . .
>
> You know, what amazes me is things that you go over last year, verbatim, you go over them again. And some will go, "Oh, I remember that," but a lot of them just sit there: "uh, this is new." And I know it's not. With English it's just a repeat--year to year to year: same thing.
>
> INTERVIEWER: YOU THINK IT'S A MATTER OF THEM NOT LEARNING IT, OR IS IT THAT THEY LEARN IT AND FORGET IT OVER THE SUMMER?
>
> I don't know, I just don't think that sometimes they learn it completely. They learn enough to get by with. And they learn enough that they get a "C" on the test, or a "B" on the test. But they haven't learned it all, some of them forget a great deal.

From this perspective, then, the idea of motivating the students or capturing their interest becomes more than a simple preference for a pleasant atmosphere in the classroom. It becomes an integral part of transmitting the knowledge: if the students are bored, they will attend to the lesson only to the extent that they need to in order to get a minimally satisfactory grade. The affective and motivational aspects of Ms. Skylark's instructional practice are thus closely intertwined with her conception of the subject matter.

Ms. Richards: A Cityside English Teacher

Ms. Richards was an 8th grade English teacher at Cityside. She also taught a foreign language class and was head of the foreign language department at the school. These were not, however, the only courses she had taught. After getting a B.A. in elementary education at a small liberal arts college, Ms. Richards had taught fourth grade for three years in a medium-sized city. She then spent a year working in a European country (partly as a way of sharpening her language skills). Returning to the midwestern U.S., she taught fourth graders for another two years. Then, growing "restless," Ms. Richards obtained a job with the Department of Education in Guam, where she taught fifth graders for two years. After this, she took a job with the U.S. Defense Department, and taught for two years in a European country.

Returning, finally, to the U.S., Ms. Richards went back to college for a M.A. in education with a reading endorsement, which, she explained, was "the closest thing they had to a Master's in reading." She heard from a friend in school that Morton was a good place to live and, wishing to escape the cold of the upper midwest, she applied for a job there. As she described it:

> When I came [to Morton for an interview] they didn't offer me a job. They said they couldn't promise anything. And I moved here anyway, and I started out here [at Cityside] as a half-time teacher. I taught one reading class and I taught one Texas history class, and I helped with P.E. That was my first year, and I just came in the afternoons. . . . I just got certified in English this summer and I've been teaching it for five years. But when I first came, nobody told me that I needed to take more hours, because my [teaching certificate for another state] is one through eight, grades one through eight, and in Texas, an elementary is one through six. See, so technically, since that was my certificate, I could teach in junior high without having the extra hours. But then they said I had to have one more class.

Ms. Richards's shift from elementary teaching to teaching in junior high was strictly fortuitous: the first available job opening in the district had been at the junior high level, and she had taken it. In fact, she had initially been uncomfortable with the idea of moving up to the junior high:

> I really didn't think I'd like junior high, or that I was cut out for it, but this [her original half-time status at the school] was perfect because it was a chance to see what it was like without having the full load and all the responsibilities. . . . I just thought I'd like younger kids. Even though I had taught fourth and fifth I had kind of thought about maybe doing primary sometimes. And I had taught a Head Start thing one summer. That went real well, so I just thought that was my bag. But I started here, and I enjoyed it. Then, the next year there was an English opening. [She then explained that she initiated the foreign language course she teaches--she merely needed to generate enough student interest to justify the course to the school administrators].

Ms. Richards's classes followed a number of well-established routines. The class began with "warm-ups." These were short (approximately 5 to 10 minute-long) activities which the students began as soon as they entered the room (Ms. Richards's assignments for the day were always listed on the board for the students to read as the entered the room). These warm-ups sometimes had to do with the spelling lesson for the week, or frequently took the form of "free" journal writing.

The spelling lesson itself was another highly routinized aspect of Ms. Richards's class. There were 36 spelling units in the textbook for 8th grade English--and approximately 36 weeks in the school year. Ms. Richards therefore decided that since she was required to teach all of the spelling lessons, it was best to take them one per week. On Mondays she introduced the lesson (by going over the text on it) and assigned work to the students (usually doing exercises in the book). On Wednesday she would give the students a practice test over the spelling words (this test would have the same form as the regular test on Friday). On Thursdays the class would go over the spelling assignment from the book: this would be graded in class, discussed if necessary, and turned in for a grade. Finally, on Friday, the students would be tested over the words. The students thus spent between 15 and 30 minutes of classtime four days a week working on spelling.

In addition to spelling, grammar was also a major, though not so routinized focus of the 8th grade English class. Generally, grammar units

consisted of various phases: first, a presentation phase, in which Ms. Richards introduced the concept to be learned (during the period of the TBS fieldwork, this was almost always a "part of speech"--the aim being to teach the kids how to recognize and distinguish these). The presentation was most often done through lecture/demonstrations in which Ms. Richards used an overhead projector. Students would then usually be given exercises (most often on worksheets) to complete during the remainder of the class (or during the class session on the following day). While the students worked on the assignments, Ms. Richards would slowly walk up and down the aisles, monitoring each student's progress, stopping to answer questions or to provide aid to a student on the wrong track. During this time, the students would also often talk quietly and work together. As Ms. Richards explained:

> Talking itself doesn't bother me, especially if it's related to what we're doing. So that if they see something on the overhead, or I say something and it makes them think of something else, and they say it to a neighbor, that's not going to bother me so much . . . I've always had the feeling that . . . noise often accompanies learning--up to a point

There were other curricular streams in Ms. Richards's class in addition to spelling and grammar--literature and composition, for example--but due to the periodic nature of the TBS classroom observations, and the fact that Ms. Richards's class was observed at the beginning of the fall term (when one might expect to find her focusing on "basics" such as grammar), little can be said of these. It can be noted, however, that there never seemed to be more than two curricular streams running concurrently in Ms. Richards's class. That is, when there were writing or literature assignments, these took the place of grammar assignments. The spelling assignments remained constant.

What Ms. Richards Said About Her Teaching

Ms. Richards's English class was the product of a complex mixture of pressures, preferences, and resource availability. Consider the spelling

units, which took up more classtime than any other curricular area. That Ms. Richards taught spelling at all was determined by school district policy, while her decision to pace the content out over the entire school year was the product of the amount of spelling required by the district (36 units) and Ms. Richards's ideas about how much students could be expected to learn. As she explained:

> It's expected that you do ... 36 units in a year. . . . By doing it over a week's time, repeating it each day ... Hopefully, when it's spread across a period of time it'll stick with them longer--if they've gone over it a few times, rather than one session.

The process operating here was complicated. First, there were definite administrative expectations that the entire textbook would be covered in the course. Secondly--and this is more important than it might seem--covering the whole text was not an unrealistic expectation. Thirty-six units of spelling was something an English teacher could handle (as opposed to, say, some of the history classes observed, where there were expectations that the teachers "do" the entire text--something the teachers found impossible to manage). Finally, the nature of the content allowed it to be highly routinized and pushed off into homework. As Ms. Richards explained:

> On the spelling, pretty much I do just use that text, because this is something they do, most of the time, outside of class. From unit to unit we just go down. In literature, there's no way we could cover the whole book, so there we pick and choose what we want.

And yet a considerable portion of in-class time <u>was</u> devoted to spelling. Why was that? In part, it was simply happenstance. Ms. Richards had borrowed the idea of "warm-ups" from teachers in the math department and spelling was simply a type of content that could easily be fit into this format:

> I just started [warm-ups] last year. I know the math people did warm-ups. They do it just to get them working with the numbers again, and I just use it as a means of getting them settled down. And also, it's to cover material that they've already had . . . After we've done this and talked about it, maybe in a week, a warm-up will be just ten simple little things that they'll do, something they can do quickly, but it's for reenforcement.

The function of the warm-ups, in other words, was to settle the students at the beginning of class while allowing them to do classwork. The nature of the content, while obviously not irrelevant, was of secondary importance. However, another classtime aspect of the spelling units--the practice tests--performed a very different function:

> The practice test I give them because when you tell them to be studying their words . . . they don't. . . . This [the practice test] is the first time that many of them have even tried the words, except for the warm-ups they've done in class, so that's another way that they're getting to spell those words. . . .
>
> INTERVIEWER: HOW MUCH DO THE PRACTICE TESTS COUNT?
>
> Nothing.
>
> INTERVIEWER: THEN WHY WOULD THEY STUDY FOR THEM?
>
> Oh, they don't study for the practice test, it's after the practice test, then they know which words to study for the Friday test, and that's the one that counts. . . .
>
> INTERVIEWER: HOW DID YOU FIGURE OUT TO GIVE A PRACTICE TEST?
>
> Oh, Well part of it, I guess, even way back in that old fourth grade speller, there's a practice test . . .and again, some of them just do not ever look at those words unless you do it in class. . .

The students, it should be noted, were not told that the practice tests did not count towards a grade. The point of the test, then, was twofold: it encouraged the students to study the spelling words, and it cued them to the content that would be on the "real" test two days later. These "real" tests were themselves shaped in important ways by outside influences: the practices of the other 8th grade English teacher at the school (more experienced with the subject matter at that grade level than Ms. Richards) and the general, amorphous pressure to teach the students something that would help them on the standardized tests (a portion of which is devoted to spelling and vocabulary):

> Now, this is the first year I'm giving a little different spelling test where I have the words written down, and some are spelled correctly and some aren't, and they have to pick them out and spell the misspelled ones correctly.

INTERVIEWER: HOW DID YOU MAKE THAT CHANGE?

Partly, my next door neighbor [another, more experienced, 8th grade teacher] would use that technique. And when I started thinking about it, when you've got spelling problems, you've got to recognize that you've got the problem--[you've got to] know it's misspelled. . . . and then again, on the Iowa test, the spelling part, that's what they're doing, they're identifying misspelled words. So it might give them a little bit of an edge, we'll see this year.

This year, for the first time, I've put sentences on the tests where they have to fill in the spelling word where it makes sense, so they're concentrating on the meaning. Because then they have to do things like that on the Iowa test and all of that.

Before the final test on a spelling unit, however, there was yet another related activity that took up classtime: the review of the exercises from the vocabulary text which took place on the Thursday before the test. Here again, the function of the activity is not so obvious as it might seem. In part, going over the exercises was intended to be a way of reviewing the material and prepping the students for the test. However, the practice test had already done this in a very explicit way, and the textbook exercises were often unrelated to anything that would be on the test. A more important function of the Thursday review, then, was that it provided the students with a relatively easy grade while at the same time "teaching" the students responsibility (in a fashion similar to Ms. Cargill's insistance that her students keep their work organized in notebooks). As Ms. Richards explained:

INTERVIEWER: AND YOU ALSO GIVE THEM A GRADE FOR TURNING IN THEIR UNIT?

Yes. The work is really easy I think, but the biggest thing there [is] a self-discipline lesson, and following directions. It's assigned on Monday and they have to have it here on Thursday . . . My first two years here I would take make-ups, you know, if they didn't get it done, I just hounded them until they got it in. So I would end up, before the six weeks grades were due, with a stack this high of make-up work. But they'd wait until then and then they'd stay up for two or three nights, you know, and mom would just sit there with a ruler or something and get them to get that work in. And then I was stuck with correcting it all at one time and it taught them nothing about self-discipline and responsibility. So what I'm doing now is, they earn points if their name isn't on the board [i.e., if they don't misbehave]--each day they earn a

> point and at the end of the six weeks, they can drop one grade if they have enough points. So if they've forgotten their paper one time, they're still okay, and then, if they've forgotten it more than once, well then, it's going to hurt their average. . . . It really doesn't take that long for an average ability student. The hardest thing is sitting down and disciplining yourself to do it.

As an aside, the idea, implicit in these remarks, of providing lower-ability students with a grade cushion, was also reflected in some of Ms. Richards's other practices. For example, she gave different vocabulary tests to students of different abilities (a response to the fact that this was the first year of heterogeneous ability grouping in English--prior to this, there had been a remedial English section):

> I'll give two spelling tests. It's a dittoed sheet. And so I'd just go around and give everybody a copy rather than giving them from the front and passing them back. And this way then I'd give the easier test to certain students. And that way it gives them a chance to pass and a chance to succeed. And it isn't like they're aceing it out, that they're just ... going wild with high grades that they don't deserve.

Thus, with the grades for getting work in, and the easier tests, students could pass the course with a minimum of effort (since homework grades, i.e., the handed-in assignments, counted a third of the 6 weeks' grade, while the vocabulary test and the grammar/composition test each counted a third also):

> It might mean a C-, but they would pass if they hand in the work. Well, I should qualify that, because if they would be making like a 50 or something, even if they've turned in everything, they would get a 'D'--that's the standard policy of the school district. A 'D' means that they've turned in all the work and have tried, but it still isn't up on a passing level. But . . . I'm gonna give them enough successful things so that they would pass. Now, I might have to modify an assignment for one, compared to the other.

To return to the matter at hand, however, we can see that the spelling unit, a well integrated and coherent set of four activities, could also be seen as a melange of activities serving very diverse purposes: the units themselves were responses to district requirements and the nature of the textbook; the warm-ups were ways to settle the students down at the beginning of class; the practice tests were ways of getting the students to attend to

the unit and of cueing them to what would be on the Friday test; the Thursday in-class grading of the textbook exercises was a way of teaching the students responsibility and giving them a grade cushion; and the Friday tests as, in part at least, a way to prepare the students for the standardized tests (with dual-level tests used as a response to the de-tracking of the school). And what, in the end, was the purpose of the spelling unit? As Ms. Richards explained:

> And then, I'm not even that concerned with having them know these words forever, because I know they won't. And I don't know the words I learned, you know, forever, but I know enough that if I recognize that it's wrong, or have a feeling that it's wrong, I'll go to a dictionary and check it; and that's what I want them to learn to do.

In short, Ms. Richards saw the content of 8th grade English as having a very ambiguous status. In the first place, as the quote above suggests, she was doubtful about the possibility of teaching students vocabulary words in 8th grade that they would remember very far into the future. This uncertainty about the relevance of the subject matter extended, in a somewhat different fashion, to the grammar:

> I have trouble, sometimes, justifying all the time that we do spend teaching grammar, parts of speech . . . I did a writing seminar summer before last, and I choose the grammar. There was a group studying about grammar, and all we came up with was that it's about 50-50 as to who feels grammar is necessary and those that feel it isn't necessary. And I wouldn't do away with it all. But I would like to get myself to be working more with writing and [have] grammar as a secondary tool. . . . Because to me, you can have some kids that can come up with some really great writing things and never know that that's a noun, maybe. But they can still come up and communicate. And really, when you're out of school, if you don't know if that's a direct object, the only time it helps you is mainly for pronouns . . . Otherwise, for hearing the language, they learn it. And so it seems it would be better to concentrate more on oral communication . . . and reading more, so they get more experience with the writing.

A second ambiguous feature of the subject matter of English was its status as a trans-grade level phenomenon. Ms. Richards, very much like Mrs. Skylark, the 8th grade English teacher at Countryside (who, like Ms. Richards, had also been an elementary teacher and a 7th grade English teacher) recognized that she was teaching subject matter--vocabulary, parts of speech--

which had been taught as early as elementary school and would continue to be taught into high school. This situation was even reflected to some extent in the textbooks used for the courses. As Ms. Richards put it:

> [The textbook] is quite important . . . because . . . [its] in a structural sequence type thing. Since we use the same company's text for seventh and eighth anyway, then you build on what's been done before. . . You know that the terminology you're going to be using should be the same terminology they heard before . . . you have a uniformity there.

In other words, the organizational structure of the English curriculum across the grade levels strongly implied that the content was <u>not</u> going to be learned in any given year. It is at least in part this curricular inertia--the fact that a common (and fairly large) core of content is taught from elementary to high school--that made possible Ms. Skylark's importation into junior high of attitudes developed while teaching in elementary school--an importation also reflected in the following remarks by Ms. Richards:

> INTERVIEWER: DOES THE TEXTBOOK SERVE AS A GUIDE WHEN YOU'RE MAKING UP TESTS?
>
> Yes, but again, having taught English before, and having taught elementary, I have things that I think are important like, when we do the nouns, there isn't much about possessives or plurals, you know, they just touch on it. And yet that's something they still make mistakes with. So I'll include that. Cause I know they've had that somewhere along the line. And if they haven't by now, they should have had it.
>
> INTERVIEWER: HOW DID YOU LEARN OR DECIDE TO TEACH IN THE WAY THAT YOU TEACH?
>
> Trial and error (laugh). That good enough? No? No, I would say . . . I'm sure I pull things from the elementary and probably my reinforcing and the activities and maybe even having the overhead and maybe more visual things come from having worked with younger kids. Also, as far as the introducing and hearing examples, and then doing written examples and then them [the students] doing the work, that sort of thing, I first saw a real plan for that when I was in graduate school.

In short, Ms. Richards's set of instructional practices had been collected here and there in the course of her varied career: some of the elements had been picked up in graduate school, many came from her experiences as an elementary teacher, and some, as described earlier, had been developed recently, often modelled on the practices of other Cityside teachers.

Mr. Ralston: A Countryside Math Teacher

Mr. Ralston, the 8th grade math teacher at Countryside, had himself grown up around Dewey and had gone though the Countryside schools, graduating some 30 years prior to the study reported here. He had pursued a highly varied career in teaching. As an undergraduate, he had majored in agricultural education and military science. After a brief stint in the army following graduation, Mr. Ralston spent almost ten years teaching science and math and coaching boys' and girls' basketball in a large school district in the region. He then spent an equivalent period of time in a Job Corps education program as a teacher of basic skills (primarily math) to students in the metalworking trades. He had also spent a number of years teaching at the elementary level (where he had been responsible for the full range of subject matter areas: reading, math, spelling, science and the like) in the Morton school district. He had finally returned to the Countryside area and had been teaching 8th grade math for four years at the time of the TBS fieldwork.

Mr. Ralston's classes followed a cyclical pattern. First, he would introduce a topic (usually a formula or a type of problem such as converting fractions to decimals). These presentations usually consisted of Mr. Ralston defining the formula or procedure and then putting example problems on the board and working through the steps for the students. The subject matter (and the examples as well) were usually drawn directly from the textbook. That is, Mr. Ralston's lectures were essentially performances of the textbook.

After these presentations, the students would be given an assignment having to do with the topic just introduced. These assignments would often be exercises from the textbook, but Mr. Ralston would periodically use worksheets which he himself had developed to make the topics more

"practical" or relevant to the students. The remainder of the class session would be taken up with the students working on these problems (which became homework if the students didn't finish them in class).

The next day would begin with "warm-ups" (sample problems on the topics introduced the day before). As Mr. Ralston explained, these were done "primarily to keep them busy while I perform the clerical duties I have to do." The class would then go over the homework problems, with different students being called upon to provide answers and explain how they arrived at those answers. If the students did very poorly on the homework the cycle would begin again. Otherwise a new topic would be introduced. Approximately two of these two-day cycles would be completed (usually Thursday-Friday and Monday-Tuesday) before a test would be given. However, if the students did very poorly on the test one or both of the cycles could be repeated.

Mr. Ralston Talks About His Teaching

For Mr. Ralston, subject matter was defined completely and explicitly by the textbook. As he put it: "Everything is in the book. I'm not making up this material." This attitude differs somewhat from the attitudes of most of the non-math teachers who participated in the study. With the exception of Mr. Larson, the history teachers (even Ms. Marsh, who used the book very heavily in her lessons) viewed the textbook primarily as a resource rather than a sacred text, and thus felt free to use information from other sources in their lessons, to skip portions of the text, or even to disagree with statements in the text. Learning to be organized, learning the way in which historical argument is put together--these were more important goals than learning the content of the text. The English teachers, by contrast, relied very heavily on their texts to teach spelling and grammar--in the former case because the texts allowed them to routinize the subject matter, in the latter

case because the texts served as useful compendiums of rules, illustrations, and exercises. At the same time, however, both English teachers expressed some doubt over the validity or usefulness of these subjects as they were embodied in the texts. Moreover, where for the English teachers spelling and grammar were seen as almost ritualistic repetitions of the same subject matter that the students saw year after year for most of their academic careers, in mathematics there was a real sense of curricular progress, a sense that the subject matter was leading somewhere. Eighth grade math, in particular, was seen as a juncture point at which the previous seven years of instruction were summarized as the students were prepared for algebra, geometry (or perhaps non-college math). As Ms. Ralston explained:

> 8th grade math is the culmination of arithmatic. Anything beyond that, you're going to start specializing: algebra, trigonometry, and geometry. And it is the most difficult one, because it is compiled, it's got all in one . . . If I have a 6th grade book, it will just cut off, and that's all. But that 8th grade book will go [on]. It's even got geometry and trigonometry. It's got the trigonomic functions in there, sine, cosine, and all that. It goes, you know, from A to Z; whereas a 5th grade or a 6th grade book would cut off at a certain point and it doesn't mentioned anything else.

If the textbook is the ultimate repository of subject matter knowledge, then it follows that the teacher's role is essentially to see that this knowledge is communicated to the students. It therefore becomes important to understand the teacher's conception of why the subject matter is difficult to the students (that is, why it is that the students can't simply read the text to learn the content--since the content is completely explicated in the text), and what he or she can do about it. As we shall see, Mr. Ralston and Ms. Hunt (the math teacher at Middleburg) addressed these issues in rather different ways.

For Mr. Ralston, there were two reasons why students needed instruction (i.e., two reasons why they couldn't simply learn math by reading the book).

The first was a matter of "language" or "relevance." That is, they needed to have the text "translated" into a language they could understand. The second reason they couldn't learn was that they were lazy and wouldn't learn unless forced to.

The "linguistic" problem had two linked aspects. First, to use some terms that Mr. Ralston would never have used, it was a matter of translating the knowledge from its "declarative" form as it appeared in the book into a "procedural" form: of taking "knowledge that" and turning it into "knowledge how." Thus, as already mentioned, Mr. Ralston's fundamental mode of instruction was to work through problems on the board, occasionally quizzing students about which steps should be taken at particular junctures in the problem solutions. He explained:

> A lot of times, you know, they have a problem [i.e., an exercise] in the book, but they don't understand it. They read it, and they still don't understand it. You'll have to interpret it for them and a lot of times break it down into language in which they can understand it. And then you guide them and show them by working examples on the board, and in turn, giving them examples and seeing if they can recall what you did and the steps involved and what you were doing.
>
> I think that most of them learn by doing. If they would do their homework, and do the drill, and what I call related activities in the classroom to help them reinforce those skills, I think they would learn it a little bit better. Now, that's a reason why I keep giving them those sheets, you know, with the practical things on there. . .

This style of teaching by performance and demonstration carried over into other aspects of the course. Mr. Ralston invariably went over homework assignments in class, calling on individual students to explain how they worked a given problem. When someone failed to give a solution or gave an incorrect answer, Mr. Ralston would go to the board and work through the problem step by step, quizzing the students (often the particular student who failed to give the correct solution) about how the problem should be addressed

at each step. Similarly, while tests were obviously taken individually and in silence, afterwards Mr. Ralston always went over them orally in class, calling on students to explain how they arrived at particular answers, going over the answers on the chalkboard.

As we shall see later, Mr. Ralston's own knowledge of the subject matter seemed to be largely "procedural" as well--that is, he would work the problems himself but could not or would not go to great lengths to explain them, nor did he seem interested in possible sources of student misunderstanding or incomprehension: one could either do the problems (a matter of drill and practice as much as anything else) or one couldn't. But more of that later. For the moment, let us continue with the matter of how Mr. Ralston translated the book for the students. As already suggested, he did this in part by turning the text into activities, practices, illustrations or examples. But in the quotations given earlier Mr. Ralston also spoke of "breaking [the subject matter] down into language in which they can understand it," and giving the students sheets with "practical" things on them. The references here are to the second means by which the text was translated: the encapsulation of the formulas and problems into "practical," "everyday," or "relevant" problem formats. As Mr. Ralston explained:

> I think if you can present [math] well enough, with enough background about it and relate it to life itself, show them where that particular mathematic skill [fits] in daily life, I believe you would motivate him to try and to master the skill. . . . Math, for the most part, is practical. . . . As far as math is concerned, I try to teach him that which he's going to need, I try to prepare him for high school and then I try to also prepare him to figure his own, to solve his own math problems when they arise.
>
> Whatever skill that I was going to teach, I basically would try to relate that skill to some practical application. And then we will go ahead and introduce the skill and I will discuss it on the blackboard and then I would write a few examples on the board and try to see if the students are grasping the skills.

To provide a better picture of just what Mr. Ralston meant by giving a math skill a "practical application," let us examine a typical segment of one of his classes. A description (extracted from fieldnotes) of a part of a session in which Mr. Ralston was reviewing homework is given first, then Mr. Ralston's comments on the activity, from a stimulated recall interview.

> [The students begin going over the worksheet about a man trying to redecorate his house. The students are supposed to have done this work the night before.] The next problem has to do with comparisons of different prices for carpet. That is, the students have to figure out how much buying Brand A would be and how much buying Brand B would be. "Okay," says Mr. Ralston, "now, you're going to shop around and see what the best buy is. Now, Joe," Mr. Ralston calls on Joe, an Anglo male sitting near the door, "if he chooses Brand A, what would it cost him?" Joe answers correctly. Mr. Ralston then calls on Nelson, by his last name, and asks how much it would cost if the man in the worksheet bought Brand B. Nelson doesn't know the answer. Mr. Ralston calls on another student, Doak, who usually has his work done, but Doak just groans and Mr. Ralston says "Oh, you don't have yours." Finally, Vicki volunteers and supplies the right answer. "Okay," Mr. Ralston elaborates, "if he knows what this particular brand of paint costs and this particular brand of carpet costs, he can compare them with other brands and decide which is the one that is best for him." Mr. Ralston explains to the class that "the vocabulary word for today is 'subtotal' meaning that you add something up but it's not the grand total because you're going to add something else to it. Mr. Ralston then calls on Jeff to do the next problem on the worksheet, which had to do with how much the man in the worksheet would spend if he bought one set of goods--what the subtotal would be. . . . [the rest of the problems continue to examine various aspects of the materials and prices involved in redecorating a house.]

Mr. Ralston, viewing this segment of class on videotape, explained (spontaneously, he was not specifically asked to comment on this):

> You know, the reason why I chose that particular worksheet [was] to try to make it related--you know--as practical as you probably could. And I though it was very suitable. You know, they're going to decorate a room and so often a lot of the girls in the eighth grade, [they are] fourteen years [old] and they constantly want to decorate their own rooms because [in] last year's science project one girl did enter this. She redecorated her room, and she ran down everything like this as a cost analysis and then they went shopping and the mother gave her permission to do all the inspection and she thought that was a real experience. I though even the slowest student would be able to do at least seventy to eighty percent of this.

Although the quote just given would suggest that highly marked episodes (e.g., the girl's science project) were important sources of the "practical"

examples that Mr. Ralston utilized, nothing really certain can be said on this matter (he also cited his college teachers as sources of some of the examples).

In any event, the system of instruction-by-example (using "practical" illustrations) had important consequences for the way in which students were conceptualized and dealt with in the classroom. First, because math skills were conceived of as something that anyone could learn if only they would use ("drill" with) them, Mr. Ralston distinguished students primarily in terms of the amount of effort they put into their work (he would sometimes refer to this as "responsibility" or "maturity"). As Mr. Ralston put it:

> I think if the student is organized and he has the basic facts, I think I can teach him some math.
>
> INTERVIEWER: THEN IT'S NOT NECESSARILY ABILITY?
>
> You could be of average ability, you know what I'm talking about. If he does what you say and follows the instructions, if he's organized, if he would copy the problem down and start, try to start, follow the procedure, over a period of time, after drill and drill and practice, I think that he would be successful, you know, in most cases. . . . I think that maybe if the student had over-average ability it would be a lot easier. It wouldn't have as much repetition in it.

For Mr. Ralston, then, it was not primarily a matter of whether students could or could not learn, or whether he was presenting the material in a good or bad way--it was a matter of whether or not the kids were working. Laziness, rather than a lack of ability, seemed to be the major problem to be overcome:

> They look at things and they . . . can't figure out from one step to the next. . . . They want everything handed to them on a silver platter. . . . I've been trying to get them to learn the table of linear measurements and many of them won't learn it, and they get mad and go home and tell [their parents] "he won't help me" because I won't tell them how many square feet that there are in a square yard, and I think that's something that eighth-graders should be able to find out themselves. And they get upset . . .
>
> INTERVIEWER: IS THAT ABILITY OR IS THAT LAZINESS OR WHAT?

> I think it's mostly laziness or the fact that math teachers have just given them everything that they wanted to know.
>
> I just don't think that they're really thinking. I just think they're sitting there, you know. . . . I don't think they're mature enough to really understand, and that's the reason why they're not serious.

It seems to follow that if laziness was the primary reason for students' failures to learn, then the proper instructional response was not to search for other possible causes of failure or to change one's instructional style. Instead, one should simply put pressure on the students to do the work: drill them in class and keep them loaded with homework. Mr. Ralston spoke of this in terms of "forcing" the students to learn:

> It wasn't very long after that [he's referring to an incident on a videotape of his class--this extract is from a stimulated recall interview] when I had really made up my mind that I was going to just force them to do it . . . The day before I had gotten them started, and then they came back with nothing. We had done about three of those problems before they left. I had worked them on the board and they had copied them down. And then they came back with nothing. . . . And they have to do a certain amount of this. You can't learn it very well without actually having to do a lot of drill in it. You just have to do a certain amount of work.

Students' "ability" was not, however, completely irrelevant to Mr. Ralston's way of thinking about his class. Rather, what seemed to have happened was that at some point in the first half of the school year (he was observed during a spring semester) Mr. Ralston had apparently made a number of summary evaluations about the capabilities of the students in the class. Those students whom he considered to be of "low" ability (who tended to be the students taking vocational courses) were all placed on one side of the room where they received little attention from the teacher (in fact, they were positioned in such a way that when Mr. Ralston worked at the chalkboard--which was his primary mode of instruction--he had his back turned towards them at all times). Mr. Ralston explained that he ignored these students because they didn't want to participate.

> I can sort of read the expressions on their faces, if they want to be called on, and usually I call on the ones that look like they want to be called on . . . and if they drop their head, it [gives] me an indication that they don't want to be called on. . . . I don't want to embarrass those kids. . . . Some of those kids have written themselves off as total failures as far as math is concerned.

The students' attitudes could not be determined from classroom observations, and as there were no interviews with students, little can be said on this matter (it was true that they did not often raise their hands--but why should they have done so, since they could be sure Mr. Ralston wasn't going to look at them? With rare exceptions, however, they remained engaged in the lesson during class.).

Mr. Ralston's class was thus divided between the low ability students who were out of it, and to whom Mr. Ralston gave little instructional attention, and the rest of the students, of mixed ability levels, to whom the lessons were directed. What emerged from this situation was a rather clear-cut dependence on a certain segment of students to provide him with help (in the form of answering questions, whether rightly or wrongly) in the public demonstration and performance of the problems. These students functioned in a way very similar to the "steering groups" that Lungren (1977) has described. For Lungren, steering groups were those students (usually in the middle range in terms of ability) on whom the teacher focused and in terms of whom the pace of the class was set. In Mr. Ralston's class, by contrast, it might be more accurate to speak of a "steering function" rather than a "steering group" per se. That is, Mr. Ralston's mode of instruction required that students respond to his questions and solicitations, and the ways in which the students did this structured the pacing of the class and the emphases which were placed on different aspects of the subject matter. As a system, there was nothing in this to prevent the very worst students in the class from monopolizing

participation and slowing the pace to a crawl. Mr. Ralston solved this problem by positioning the "lower ability" students to his back. For those students from the mixed ability group who might cause pacing problems, Mr. Ralston had developed another distinctive classroom management technique: sarcasm. Students who were forthcoming too often with wrong answers, who asked too many questions, or who were not able to respond correctly to a question, were publicly made fun of and soon learned to withdraw from classroom activities. For example, when one student raised her hand and said that she did not understand what Mr. Ralston had just presented, Mr. Ralston replied:

> I'm saying it in English! Do you understand English? When I explain something to someone, and then they say they can't understand it, I go "bo-bugga-bugga"! And then when they say "Huh?" I go "Well, I told you in English and you said you didn't understand, so I thought I'd tell you in another language"!

This should not be misconstrued as merely a punitive or mean response. It is, instead, a predictable sort of response for someone with Mr. Ralston's conception of his subject matter. That is, as mentioned earlier, Mr. Ralston seemed to take a highly procedural view of math: it was something one did, not something one "understood." His formula for math success could be expressed as "memorize the formulas, then drill." For a student to raise her hand and say she did not understand--when the formula was on the board and Mr. Ralston had just worked through an example--was probably literally incomprehensible to him.

Ms. Hunt: A Middleburg Math Teacher

At 26 years old, Ms. Hunt was the youngest teacher in the TBS sample. She was in her fifth year of teaching, her fourth year as the 8th grade math teacher at Middleburg. Unlike many of the other teachers in the sample, Ms. Hunt was teaching in the subject matter area in which she had specialized as an undergraduate. As she explained, her decision to major in math was linked to her feelings about the subject, while her decision to teach in the first place was relatively automatic:

> I started out as a science major, decided that I didn't really have the qualities that it would take to be a medical technologist--didn't have the stomach for it. So I decided math was my next best field, as far as interest. I find other subjects are fairly easy for me, so they're boring, but math is more difficult, I have to work at it and I like the logic, so I chose that subject. As far as teaching, I come from a long line of teachers and it just seemed like the thing to do. I don't think there was much thought put into it.

With the training in math and the shortage of math teachers, Ms. Hunt was reasonably well assured of finding a job teaching math. As she recalled:

> As it happened, the day I applied I just walked in with an application. The personnel director wasn't there, so they just sent me on over to the [junior high] principal. And that afternoon they called me. Because we had three math openings and I think they were afraid I'd get away.

But if, as a math teacher, she had a highly marketable skill, why did Ms. Hunt choose to teach in a school such as Middleburg, rather than in a school in the nearby, and much better paying, Cityside district? It would seem that the main reasons were the reputation of the school and a feeling of affinity for the students:

> I came here originally because the base was here, my father was in the [same branch of the military] and I thought I had something in common with the students . . . The other reason I came, Morton doesn't have a real good reputation on discipline. And Middleburg has real good discipline, as a whole. . . . This is the first place I applied . . .

The question of the school's reputation is an interesting one, for Ms. Hunt had been trained in a small college in a very modestly sized community, had done her student teaching in a small rural school, and had taught one year

(as a sixth grade math teacher) in a rural community before coming to Middleburg. Apparently these experiences left her with strong feelings about large city school districts, though she had no first hand experience of them:

> Most large districts are pretty well bad when it comes to discipline because of the legal problems. And smaller district I think are a little more free, athough this isn't as good as the last district I was in. [In that district] they were not around a large community and they did things that you'd certainly be sued for here. . . . Like you got in a fight, they didn't even bother to ask you any questions; and you went home. You were tardy three times and you went home for a day . . . things like that . . . I think the fact that it was a smaller community, and everybody knew everybody, I think the teachers were respected more as teachers and not just teachers. Whereas in a larger city, you don't know the people, you don't know the teachers. And many times you'll come back with, "Well, they mistreated my child because he's Black," or "because he doesn't like my child," or this sort of thing. I've just heard all sorts of horror stories about Morton. I'm just not real excited about going there.

Ms. Hunt's classes were the most highly routinized of any teacher participating in the TBS. Each class period (excepting test days and the occasional make-up days Ms. Hunt allowed towards the ends of the grading periods) was made up of the same invariant sequence of segments.

First, to begin each period, she would have the students exchange papers and she would then read the answers to the previous night's homework. After the papers were graded and returned to their owners, Ms. Hunt would ask if there were any problems that students still did not understand how to work. If there were requests, she would work these problems on the board. The next class segment consisted of the presentation/demonstration of the "new" concept/topic or problem-type for the day. Ms. Hunt would illustrate on the board how to work the relevant sorts of problems--leading the students through the solution step by step. An assignment for the next day would then be made and the students would spend the rest of the class period working on this. If they did not finish during the class, the work became homework. (Occasionally Ms. Hunt would help the students get started by working one or two of the

homework problems on the board). While the students worked at their desks, Ms. Hunt would either circulate through the room checking students' progress, or she would sit at her desk, helping students who came to her with problems.

Ms. Hunt Talks About Her Teaching

Like Mr. Ralston, the math teacher at Countryside, Ms. Hunt drew her understanding of math entirely from the textbook. While she averred that

> if I don't like the way the book presents something or the order in which the book presents something, I can easily skip around and more or less do what I want to do.

she did not, in practice, skip around. What she taught was highly determined by the textbook. Thus, when asked how closely she followed the book, she replied:

> I can't think of any time I've deviated from it, except at the end of the year. And [at the end of the year] we're doing a pre-algebra unit, which isn't in the book. Other than that, I've followed it throughout the year. [For the pre-algebra unit:] I take materials from algebra books and just run them off.

For Ms. Hunt, then, as for Mr. Ralston, the subject matter of math was unambiguous and text-defined. Ms. Hunt also shared Mr. Ralston's "proceduralist," perform-the-textbook, teaching-by-illustration orientation. She made this quite clear:

> In math I think they learn by doing. That's why they have an assignment every day. Me, I always learn by example, that's why I like to show a lot of different examples and give them an opportunity to ask questions as I work problems. Ideally, I like for them to sit back and watch me work, say, two problems, and then ask questions. And then, you know, to kind of feel of it before they start asking questions.

There were, however, some importance differences in the proceduralist orientations of the two teachers. For Mr. Ralston math was an aggregation of discrete and autonomous formulas to be memorized. The problem of teaching or learning math was thus teaching students how to apply or use these formulas (hence, the practical-application orientation, the attempt to show the everyday life relevance of the skills). For Ms. Hunt, math was much more a

system of linked or integrated skills. The problem of teaching these skills thus became that of showing the students how they fit together:

> When I introduce a lesson a lot of times I will ask leading questions to get them to come to some conclusions before I state whatever it is I'm trying to get them to understand. Many times I'll see if they can remember what they've learned in previous years that relates to what we're doing.
>
> I teach by example . . . if I can I will try to introduce something by trying to draw information from them that maybe they can remember. . . . For instance, maybe before I give them the definition of a triangle, I'll ask them what is their definition of a triangle, or things like that.

Formally, however, Ms. Hunt's presentational style was very similar to Mr. Ralston's. She would put a problem or formula on the board and then work through a set of illustrations, explaining her procedures step by step (often she would go for five or ten minutes at a time working at the board, her back to the students). To keep the students engaged in the presentation, Ms. Hunt would ask them to supply (in choral responses) the proper sums, products, or whatever, of the arithmetical steps in the problem solutions. Alternatively, if the board work dealt with concepts or formulas previously introduced to the students, Ms. Hunt might ask the students to call out what the next step in the problem solution would be. As Ms. Hunt explained: " I just ask the class in general and they just answer, whoever. I don't like to call on a student. I don't like to put a student on the spot." Mr. Ralston would do something similar, though he would usually zero in on particular students.

Ms. Hunt also alloted a certain amount of classtime for the students to ask questions about the topic just introduced. This, too, followed from her proceduralist orientation: that is, Ms. Hunt recognized that it was possible for the students to gain a "declarative" understanding of the topic without having grasped a "procedural" understanding of it--in other words, they might know "that" something was the case, but not know "how" to actually work it:

> A lot of times they understand until they begin working. Once they actually begin doing something on paper, they find their problems--or they just need the reassurance they're doing something right.

According to Ms. Hunt, this demonstration strategy of instruction was based upon the type of instruction which she had found most helpful when she herself had been a student:

> A lot of [facets of her teaching] have come from experiences--how I learned best. I remember some of my better teachers, that [in their classes] I learned best from examples and a lot of repetition

Thus, while Ms. Hunt's "demonstration" style of instruction resembled Mr. Ralston's in some aspects, there were significant differences. Most importantly, Ms. Hunt's demonstrations lacked the concrete or "practical" trappings of Mr. Ralston's examples. Instead of developing elaborate scenarios of someone comparing carpet prices to redecorate a room--a scenario in which a given type of problem might be encountered only once--Ms. Hunt used large sets of barely detailed problems. So, instead of having (in Mr. Ralston's version) one question about the area of carpet needed to cover a room with given dimensions, one would have (in Ms. Hunt's version) the prefatory phrase "find the areas of the rectangles with the following dimensions" followed by a list of 15 or 20 sets of height and width figures. In short, as already noted, Ms. Hunt lacked Mr. Ralston's conviction that practical applications were the key to learning math skills (a difference that may have stemmed from differences in their career patterns: Ms. Hunt moving directly from college into teaching, Mr. Ralston spending years as a Job Corps instructor teaching job-relevant math). In any event, this difference in conceptualization was linked to many aspects of Ms. Hunt's class which distinguished it from Mr. Ralston's (in spite of their shared views on textbooks and instruction-by-demonstration).

Consider the seemingly peripheral fact that Ms. Hunt began her classes by rising from her desk, walking to the center of the room, calling for quiet and

beginning to read the answers to the previous day's homework problems. The students were expected to have already exchanged papers by this time and to be grading each other's work. As each class began this way, Ms. Hunt had no need to verbally frame the event: merely by moving to the center of the room she signalled that it was time to attend to her. After she had read all of the answers for the homework problems, she would then ask if anyone needed to have an answer repeated. After the papers were graded, they would be returned to their owners, and Ms. Hunt would then ask if there were any problems that anyone needed to see worked on the board.

In part, this opening was merely a way of settling the class and getting the paper work of grading done with a minimum of effort. As Ms. Hunt explained:

> Well, mainly, it helps me with the grading, because I take a daily grade and 120 papers is a lot to do. The other thing is they immediately get their paper back and can look over to and answer questions while it's on their mind. Whereas, if they have to wait two or three days, they may have completely forgotten what we were talking about.

As these comments suggest, however, the process also had important implications for the pacing of the class--and not just in the way Ms. Hunt suggested. The system also meant that the "topic cycle" was one day long in Ms. Hunt's class. Where Mr. Ralston spent one day introducing a topic and an entire second day reviewing it (a two-day cycle), Ms. Hunt collapsed the review session into a ten-minute segment at the beginning of the period and introduced a new topic each day. In keeping with the faster pace, the daily topics in Ms. Hunt's class were more atomized and were presented in a much barer form than in Mr. Ralston's class. As already suggested, this was possible because Ms. Hunt did not have any views similar to those of Mr. Ralston about the importance of making the subject matter "practical." Also, as the quote above suggests, the steady pace and daily progression of the topics (e.g., unlike Mr. Ralston's class, their were no provisions for

repeating a cycle in Ms. Hunt's class) made it possible for Ms. Hunt to better link together the stream of skills being presented to the students: her cycles were linked, while Mr. Ralston's were discrete (again mirroring their conceptions of the subject matter). Finally, the faster pacing also created a situation in which individual homework grades counted less in Ms. Hunt's class than in Mr. Ralston's. As Ms. Hunt put it:

> I take about twenty homework grades each six weeks and there're only about three or four tests. One individual assignment is not going to make or break them. But the problem is they will either get most all of them or they're the type that won't get any of them.

In short, Ms. Hunt's conceptualization of math as a system of linked skills led to--or at any rate, was intermeshed with--a number of other distinctive features of her instructional system (though the system as a whole remained procedurally oriented). It is especially worth mentioning Ms. Hunt's style of dealing with students and her conceptions of how students learned math.

After the day's lesson had been presented, Ms. Hunt would briefly solicit questions, which would occasionally lead her to repeat certain steps of the problem solutions on the board. Ms. Hunt would then assign the students their classwork/homework for the day. If the students finished the assignment in class--and they were usually given about half of the period to work on it--they would have no homework for the night. This was intended as an incentive to get the students to work.

While the students worked on the assignments, Ms. Hunt would usually sit at her desk, often grading papers or performing some administrative task. During this time the students were free to come up to her desk with their papers for individual assistance. There were often lines of three or four students waiting to be helped. Ms. Hunt described the problems and benefits of this approach:

> Mainly . . . I want to deal with them as quickly as I can, get them back in their seats. Because the more people I have around my desk and the more people I'm trying to deal with one to one, I have a more difficult time noticing what's going on in the class. I tend to focus on one thing. . . . If they see me moving around the room, well then, they'll raise their hand. They would prefer me to come to them. They don't like to get up any more than I do.

The students who remained at their seats were allowed to talk and work together on the assignments, so long as the noise level did not rise too much.

> There's a lot of communication between the students. If they can help each other, sometimes that's better than me helping them. . . . Sometimes students kind of feed off of each other. Where one has a weakness, another has a strength, and the other's strength is the other's weakness. They help each other, and there are times, I think, when they can help each other more than I can help them.

When there were no students at her desk asking for help, Ms. Hunt would from time to time get up and walk around the room, making sure the students were working and checking how they were doing the work. If she saw students on the wrong track, she would stop and explain to them where they were making mistakes.

It is obvious from these brief descriptions that Ms. Hunt allowed, even approved of, focused individual assistance and unstructured cooperative problem solving (students did in fact work together a great deal). In part, one can look at this as a solution to what in Mr. Ralston's case was described as a "translation" problem. Mr. Ralston tried to translate math into a form which the students could understand by demonstration and by putting the topics into "practical" applications. Ms. Hunt also used the demonstration technique, but for her the other aspect of translation was something best left to the students themselves (thus, her practice of allowing them to work together):

> They talk in the same language. Sometimes when they ask a question, I'll have to get another student to tell me what the kid asked because they don't always ask questions very well.

Underlying this system is a certain belief about how students learn. Mr. Ralston thought students simply learned by practice and drill, so he attempted to motivate them to work by trying to show them how the math skills could be useful to them in everyday life. Ms. Hunt, by contrast, felt that learning was in large part a matter of "mental maturity":

> I think it's mental maturity myself. You reach a point when it's much easier for you--it may never be real easy, but I think sometimes we teach things too soon. You probably remember when you were trying to do word problems: they were terrible! But if you to back and do those same problems now, they're much easier.

"Maturity," as Ms. Hunt used the term, was closely related to both the students' "natural ability" and their willingness to work hard. Natural ability was conceptualized as a sort of innate characteristic:

> I think some people just have a more logical mind. They just can put things together more easily, while others tend to go more towards the arts and that sort of thing, which does not require logic. Some people have to see things in black and white right down in front of their face and others just can reason better. . . . Some of them if you say, well, 10 times the distance between the earth and the moon is 10 times the circumference of the earth. And then two or three sentences later you happen to mention the circumference of the earth and ask them the distance to the moon, some of them could tell you, others could not. They can't put the material together.

Stated baldly, this kind of conception of ability is probably not uncommon. But when it is linked with the "maturity" concept it seems to have very different implications: that is, the teacher can't determine whether the student's problem is one of ability (and is therefore irremediable) or maturity (in which case instruction or, especially, student-student problem solving, may be of some ultimate help) and therefore has no justification or reason for freezing out "low-ability" students in the fashion of Mr. Ralston.

In this respect, however, there is one important circumstance which must be mentioned, though its significance cannot be accurately gauged. This is the fact that math students were tracked by "ability" (i.e., standardized test scores) at Middleburg, whereas they were not at Countryside. Thus Mr. Ralston

had to deal with students from every ability level in the same classroom, whereas Ms. Hunt had different classes for high-, middle-, and lower-ability students. It my well be, then, that pure ability-based conceptions of students might have been more common in the high and low tracks and that the "maturity" concept was peculiar to the way she thought about her middle-level students. At the same time, Mr. Ralston's practice of ignoring the low ability students and using steering groups to pace the class may well have something to do with the fact that his classes had a mix of ability levels.

In any event, at least with regard to the class studied here, Ms. Hunt did think in terms of a "maturity" concept. As stated earlier, this concept had a link to a notion of "effort." Thus, in explaining why some of her students didn't get the work done, Ms. Hunt stated:

> Many are lazy. They just don't do the work. Many, or most, are very irresponsible when it comes to make-up work or studying for a test. They don't take it upon themselves to do those things. Many miss a great deal of school. Others are looking for an easy way out.

This notion of laziness obviously has many parallels to Mr. Ralston's explanation of why kids didn't get their work done. However, Ms. Hunt drew different implications from this premise. For her, because the lack of work as not a matter of mere laziness, but of maturity and ability as well, there was no question of "forcing" students to do the work:

> I can sit here and try to beat them over the head [but] I've got too many students that want my help. If I'm trying to force a kid to do something, then I am not able to give my time to those who want me. And if they choose not to try, not to learn, then they can sit there, and I'll work with those that do want to.

Thus, to sum up, her system of instruction was geared to presenting (through illustrations and demonstrations) the topics (while trying to link them together), allowing the students the opportunity to seek help or further explanation (either from her or from other students) and giving them time to work. Beyond that, there was nothing more she could do.

With Ms. Hunt we come to the end of the case studies. As the cross-references within the cases make clear, there seem to be some general themes or processes at work both within and across subject matter areas, though the nature of these processes seems to differ for each content area, and the practices of teachers within a given content area differ, often in significant ways, according to the nature of their beliefs. In the next chapter, some of the most fundamental of the themes underlying the cases are examined and their implications for research and teacher education are discussed.

CHAPTER FOUR:
DISCUSSION OF THE CASE STUDIES AND THEIR IMPLICATIONS

This chapter examines the themes and issues raised in the preceding case studies. These issues can be grouped into three broad and related categories: the effects of subject matter conceptions, career influences, and "experience" on teaching practices.

Subject Matter Conceptions

Somewhere along about the sixth grade in most school systems, there is a juncture in the way "teaching" is generally conceptualized. On one side of this juncture teachers are teachers of certain types of students or of children at a certain age level: We speak of "first grade teachers," "fourth grade teachers," and so on. On the other side of the juncture, as one moves into junior high and high school, the teacher becomes a teacher of a subject matter area: a "history teacher," an "English teacher," a "math teacher."

While this juncture point is admittedly receding towards the earlier grade levels and may soon disappear altogether, it is still possible, for the moment, to point to it as an important reflection of social conceptions about education and teaching: at the junior high level (if not earlier) learning becomes specialized. The differentiation of the curriculum becomes manifested in institutional arrangements. Distinct and autonomous classes--taught by different teachers in different physical locations--are set aside for the different content areas. The grouping of students that formerly took place within the classroom acquires institutional legitimacy as students are tracked by ability. The teacher's job becomes a matter of putting on five or six performances per day -- and unlike the old-fashioned elementary teacher, who might go through five or six performances of different subject matter

lessons with the same group of students, the secondary teacher is more often in the position of doing the same performance of a subject matter lesson for five or six different audiences. In short, the organization of the secondary teacher's work setting emphasizes the material, the subject matter, rather than the students or the relationship of teacher to student.

These rather obvious points are emphasized here as a way of making the introductory point that junior high and high school teachers are unavoidably committed to dealing with a body of knowledge, day in and day out, for the course of a school year.

However, as the preceding case studies illustrate, there are considerable differences in the ways teachers conceptualize the subject matter areas they work with. The history teachers, for example, worked with a curriculum that had several distinctive features. First, it was defined primarily in terms of statements or propositions about historical periods, events, and personages. These facts were set down in authoritative fashion in the textbooks they used. There were, however, no underlying theories or conceptual frameworks organizing the texts. They were, instead, constructed as chronological narratives. Finally, the subject matter was curricularly isolated in the sense that it was being presented to the students for the first time and would not be presented to them again until they were in the 11th grade (nor were there preceding courses logically leading up to the curricula of the history courses -- even 7th grade Texas history and 8th grade American history had very few areas of overlap).

The English teachers, by contrast, were dealing with a curriculum defined not as a set of propositions or statements about events, eras, or personalities, but instead as a system of autonomous skills--that is, rules and definitions for dealing with language (especially written language) which were held to exist and to be teachable without regard to use, function,

context, or intention. This curriculum was common to English courses across many different grade levels. Students were introduced to "spelling" and grammar in elementary school and were drilled upon such topics throughout high school. The English teachers were thus presenting types of content products and activities that the students would generally already be familiar with (though the specific tasks the content was embedded in might or might not be new to the students). At the same time, there was an implicit assumption that the students would not "learn" the autonomous skills that the English teachers were presenting by the end of the course. The substantive content that the skills were embedded in would change from year to year, and new skills and activities would be added upon the grammar/spelling base, but the base itself persisted. The skills were static, noncumulative. Learning vocabulary doesn't lead to anything--but learning more vocabulary. Much the same is true of grammar. (Even when more complex, essay-writing tasks are introduced in high school, they may not be integrated with the vocabulary or grammar assignments, see Nespor, 1985).

Finally, the math teachers were in a position rather different from that of either the history or English teachers. Their subject matter resembled the kinds of autonomous skills that the English teachers were engaged in teaching, but math skills seem more crystallized and explicit than the ambiguous and amorphous English skills (such as learning how to recognize parts of speech)--and indeed, the math skills were exhaustively and authoritatively defined by the textbooks the teachers used. Formulas and algorithms have precise abstract representations and are by definition autonomous of applications: the "problems" or content to which they are applied is itself generally abstract (though as we saw, Mr. Ralston felt this led to students' problems and attempted to overcome it by embedding the math formulas in concrete and

"practical" applications). Math skills, unlike either history or English, are clearly "staged" and cumulative. That is, they supposedly build upon each other over the course of a year, and from year to year, becoming increasingly more complex as time passes. The math teacher is thus in the position of supposedly adding on to what the students already know and preparing them for what they will have to learn in the future.

These different features of the curricular areas created pressures on the teachers to fomulate different types of goals. The history teachers were in the peculiar position of having to teach material which they knew the students would not retain far beyond the test over it. This perception stemmed in part from the very structure of the content--the overabundance of details and facts linked not by a overarching conceptual system, but only through the narrative of the text ("short-term memory stuff," as Mr. Franklin put it), and in part from the fact that the junior high history courses were curricularly isolated. The teachers knew that the students would not have to deal with the content area again for at least three years and that no student could be realistically expected to remember it over that span, no matter how well they learned it in the short run.

This set of circumstances allowed for two responses. One was simply to ignore the problem: to drill the students on the facts and statements in the book, whatever the usefulness or relevance of such an activity might be (this was essentially the path taken by Mr. Larson). The other response was to try to layer some supplementary system of goals and aims over the course content: for example, teaching the students general strategies for studying (e.g., Mr. Franklin's lesson on outlining); teaching the students general "organizational" skills (e.g., Ms. Cargill's insistence that the students keep their notebooks in order); teaching the students some sort of meta-knowledge about the way history texts were written (e.g., Ms. Marsh's emphasis on the status

of history as fallible opinion), or something along these lines (or perhaps two or more such supplementary goals).

The type of response chosen, and the precise formulation of the supplementary goals (if that course of action was followed) were, as we have seen, products of the particular belief systems of the teachers involved. Mr. Larson, because of the peculiar circumstances of being a "coach who taught history" (rather than a "history teacher") had no repertoire of alternative goals to draw upon -- except the goal of avoiding trouble and keeping his job (and, perhaps we might add, occasionally making the class "interesting" with stories such as the one about the "Turk"). The other teachers could generate alternative goals based on critical episodes in their pasts (e.g., Mr. Franklin's experiences teaching in high school), alternative world models (e.g., Ms. Marsh's desire to raise students' expectations), and the like. In general these beliefs seemed to operate as repertoires of explanations for making sense of the elements of the classroom situation. For example, Ms. Cargill probably did not have the students keep notebooks <u>because</u> she had determined that this was a way to teach them to be organized. All of the history teachers had the students keep notebooks, but apparently only Ms. Cargill read the particular goal of teaching students to be organized into this activity. In other words (cf. the discussion of "unboundedness" in the first chapter) the beliefs of the teachers formed repertoires of explanations or goals which could be invoked to justify particular courses of action (and, of course, once invoked they had an impact on the way those courses of action were consequently pursued -- the notebook keeping activity received much greater emphasis in Ms. Cargill's class than in those of the other teachers). This issue--the way in which a relatively small set of elements in a teacher's

belief system can be invoked to explain a large array of activities--will be returned to below.

In contrast to the history teachers, who dealt with a curricularly isolated body of content made up of statements and facts, the junior high English teachers dealt with a curriculum focusing on (albeit amorphous) skills --a curriculum so tightly integrated with that of prior and following English courses as to be in some respects indistinguishable from them.

This situation seems to have produced a pressure to emphasize process aspects of the curriculum (ways of doing things) as opposed to the achievement of specific products (i.e., the inculcation of specific facts or skills). The form that this emphasis took depended on the belief system of the teacher involved. Ms. Skylark emphasized the maintainence of a "relaxed" atmosphere and a positive affective relationship even if these seemingly interfered with the presentation of content. Ms. Richards, by contrast, put an emphasis on a very different way of doing things: she moved towards a very routinized sort of environment where the different sub-routines each served their own discrete ends (see the analysis of the spelling component of the curriuculum) rather than building up to an overarching accomplishment. For both teachers the form of activity took precedence over the ends to which it was supposed to lead. In some ways, this simply reflected a general characteristic of highly differentiated organizational environments (especially highly routinized environments). As March and Simon (1958) argued long ago:

> When tasks have been allocated to an organizational unit in terms of a subgoal, other subgoals and other aspects of the goals of the larger organization tend to be ignored in the decisions of the subunit. . . . [There is a] tendency [for] members of an organizational unit to evaluate action only in terms of subgoals, even when these are in conflict with the goals of the larger organization. (p. 152)

The argument can apply on two levels. First, the classrooms of the teachers can be seen as "subunits" within the larger organization of the

school; and the teachers' systems of auxiliary goals can be seen as "subgoals" (the goals of the larger organization, the school, presumably having to do with the transmission of content knowledge--or perhaps merely something along the lines of keeping the kids quiet). In this context, the teachers' subgoals tend to monopolize attention and cognitive resources and take precedence over the official goals of the school. Thus Ms. Skylark put more value in keeping the classroom exciting and friendly than on getting through the lesson for the day.

On another level, a teacher's classroom could itself be seen as the "larger organization," while the different activities or tasks going on within the class would be the "subunits." From this frame of reference we would expect to see something very like Ms. Richards's treatment of the spelling units: the assignment of discrete and independent goals to each subtask or subactivity within the unit. These goals were not integrated with each other, and did not add up to a larger or more encompassing goal (i.e., they did not fit into the framework of the "larger organization"). Indeed, the spelling unit as a whole was also discrete and isolated from the other kinds of activities and tasks that took place in the English classes.

These processes of curricular fragmentation and goal segregation were striking in both of the English classes, but were much less common and more limited in the history classes and almost nonexistent in the math classes. The reasons for this are not entirely clear, but may well have to do with the fact that "English" tends to be more a conglomeration of amorphous "skills" embedded in different sorts of content (e.g., spelling, grammar exercises, creative writing, literature--topics with logical but not necessarily procedural connections) while history and math, though fundamentally different in the nature of their content, tend to be more homogeneous as content areas

(note the related fact that math and history classes generally have only one textbook, while English usually has two or three textbooks).

In the case of the English teachers we also see an interesting example of the interaction of school contexts and teachers' beliefs. Ms. Skylark had no resources or fellow teachers to guide her in constructing a curriculum or system of instruction for 8th grade English, nor was there a district curriculum guide and an evaluation to oversee her teaching of particular topical areas. One can reasonably presume that this context had something to do with the fact that her classroom seemed primarily structured around her belief-based image of what classrooms in general should look like: She had little else besides her beliefs (and the textbooks) to draw upon. Ms. Richards, by contrast, derived important elements of her classroom practice from neighboring teachers (e.g., the warm ups, the practice tests, a management system not mentioned in the case study of her class), had participated in workshops on topics such as teaching grammar, could draw upon school district curriculum guidelines, and so on. Ms. Richards' classroom was composed of activity units borrowed from these sources (borrowed, apparently, because they seemed to "work" in some way) and her beliefs came into play primarily to assign meanings to these activities and to guide the substantive or concrete ways in which they would be pursued.

History and English are notable for the extent to which they make it possible for teachers to formulate systems of goals beyond or in addition to those explicitly prescribed in the textbooks or the curriculum guides. Math, at least at the junior high level, seems to differ in this respect. Neither of the math teachers seemed uncertain or unsure of what they were supposed to be teaching, nor did they question the value of teaching it. Instead, their problem was the purely technical one of deciding how best to teach the formulas and algorithms in the textbook. [Note also that history and English

have heterogeneous sets of goals or aims (concerning different types of content- or even noncontent-related goals), whereas the goal system of math classes is generally unitary--that is, the math teachers did not speak of teaching students to be "organized" or anything else along those lines].

This "technical" orientation of the math teachers raises the issue of "translation" discussed in several of the case studies--that is, the issue of how the teachers were to take the content embedded in the textbooks and enact it in a way that would allow the students to understand (and perhaps even learn) it. The interpretation of the cases becomes exceedingly complex at this point. Consider the history teachers. The four teachers differed greatly in the way they enacted the subject matter in the classroom (allowing for the only superficial similarity of the read-aloud strategies of Mr. Larson and Ms. Marsh--a similarity which well might be linked to the traditional, rural school context in which they both taught). Mr. Larson drilled the students on the text, Ms. Marsh played out the text and "explained" it to the students, Ms. Ralston used the text as a basis for discussion, and Mr. Franklin lectured on the material. Yet at the same time there was an underlying similarity: the content was in each case verbally enacted in some way. That is, "translation" was accomplished by talking "about" the course content (the textbook content, except in the case of Mr. Franklin's class). The content was for the most part formulated as "declarative" propositions about the events or personages in the texts (though in general the main goals of the teachers had to do with something other than "teaching" this content).

In the case of the English teachers, the "translation" issue really did not arise (at least in the case of the spelling and grammar units--literature units, which were not observed, would presumably have been a different case). In Ms. Skylark's class there was a heavy emphasis on talking the students

through the topics and going over the exercises in class, with Ms. Skylark taking the role of orchestrator and regulator of classroom interaction. Ms. Richards, by contrast, would generally have the students doing a great deal of seatwork at their desks. In neither case, however, was there an emphasis on "talking about" or "describing" the subject matter (as in history) or "demonstrating" it (as in math). Rather, the assumption seemed to be that the students were already familiar with the content and that the content was ordinary enough not to require any special exegeses: it seemingly made no sense to talk about spelling or grammar, to describe them in the way one might describe history; nor were these topics embedded in complex texts (they were instead, in the same sorts of texts they students had seen before). At the same time, it would not have been feasible to "demonstrate" spelling or grammar in the manner that the math teachers demonstrated or "performed" math (in part because the "rules" of English orthography and normative grammar are far more complex than junior high math formulas).

Finally, the math teachers present what is in some ways the most complex of all the cases. The two teachers had very different conceptions of the subject matter. Mr. Ralston saw the content as consisting of discrete formulas which had to be made relevant to "practical" activities if the students were to be expected to learn them. The other math teacher, Ms. Hunt, saw the content as as an integrated set of logically related skills. These different conceptions of the subject matter were closely linked to the ways the teachers presented the material (use of story problems versus lists of abstract problems) the length of time they dwelt upon it (two-day versus one-day cycles), and the ways they explained student failures and difficulties (e.g., "ability" versus "maturity," or "laziness").

However, both teachers, as the case studies show, used very similar "procedural" routines--working or "performing" problems at the board and

assigning students homework problems. This "proceduralist" orientation--doing the content rather than explaining it or talking "about" it was a very distinctive feature setting the math teachers off from the other teachers (as pointed out in the case study dealing with her, Ms. Marsh, a history teacher, did occasionally present content in a "procedural" manner by creating familiar analogies for historical situations and having the students reason their way through the situations. This was done infrequently, however, while the math teachers used the procedural approach exclusively. Ms. Marsh, incidentally, had taught math before becoming a history teacher, though this is probably nothing more than a curious coincidence).

The reasons for the math teachers' proceduralist orientation are not entirely clear. It obviously had something to do with the nature of the content itself: It is quite possible to know "how" to do math without understanding or being able to explain "what" one is doing (indeed, this seemed to be the case with Mr. Ralston, who could work examples on the board, but was seemingly unable to answer students' questions). One cannot have the same sort of proceduralist knowledge of "history." It is somewhat surprising, however, that there seemed to be relatively little "proceduralist" instruction in the English classes, though spelling and grammar would seem to be prime candidates for such an approach. The matter is not clear, although, as argued earlier, it may be that the English teachers had in fact deemphasized the "content" goals of the course to a much greater extent than the math teachers, and were in fact interested in doing other things than teaching the students the rules underlying English orthography and grammar. The less structured nature of English "skills" may have also contributed to the non-proceduralist approach.

In any event, it can be concluded from the preceding discussion that the nature of a subject matter area places important constraints and pressures on the ways teachers teach, though within these constraints, the teachers' beliefs about teaching may shape the particular manner in which the content is ultimately presented.

Career Influences

The functions of career paths are poorly examined in research on teaching (which, for one thing, does not allow us to determine how representative the cases studied here might be of teachers in general or of teachers in this particular region of the country). It may be useful, then, to briefly consider the implications of something seemingly obvious: all of these teachers had taught at a variety of grade levels, in different subject matter areas, in different schools (Ms. Hunt, the least experienced of the teachers in the sample, was the exception--though it could be noted that she dropped out of teaching the year after she participated in the TBS in order to spend time raising a family. Her career upon reentry to the profession may yet ultimately resemble those of the other teachers in the sample).

One could say of Mr. Larson, for example, that he had little more than a career: teaching for him held no intrinsic satisfactions, it was merely a way of making a living; Ms. Marsh's prior experiences as a teacher in a private school, and her idenfication with the Countryside community, were both important influences on her characterization of teaching as "teaching children" as opposed to "teaching history;" Ms. Cargill's experiences with the IRS colored her perceptions of teaching in general; Mr. Franklin's experiences as a high school teacher gave him a framework for identifying the special characteristics of junior high students. And so on for each of the teachers--their present practices and beliefs were structured, though not

completely determined, by the shape of their careers in different instructional settings.

This diversity of experiences raises an important question: that of how we are to conceptualize "teaching" itself. There is an unacknowledged tendency to treat teaching as a unitary or homogeneous profession. The very fact that we can speak of "teaching" rather than "teaching 7th grade English" or "teaching 8th grade math," the fact that we can speak of "learning to teach" rather than speaking of learning to teach a particular sort of subject matter at a particular grade level to particular sorts of students in particular kinds of schools--these habits of discourse suggest that such factors can be ignored, that they are not significant components of the task of teaching.

And yet it seems clear from the case studies that such things may be extremely important. Viewing each classroom as a closed system may have some validity for understanding the particular forms of interaction which emerge in that classroom--but teachers teach in many different classrooms (in the course of a day, as well as in the course of their careers) and it seems highly unlikely that they would segregate their experiences in these settings, that their successes or failures in one classroom or school would not, over time, affect their practices in other classrooms or schools.

The varied career paths of teachers may also have more subtle and more profound influences on teaching practices, for with each twist and turn in the career, with each new subject matter area or grade level taught, with each new administrative context and with each change in the social characteristics of the students in the classroom, the tasks of teaching change substantially. It is a central question how teachers experience such changes over time (assuming, of course, that the sort of career variation exhibited by the teachers in this study has some general relevance, at least for particular

regions or markets of the country). Do such varied experiences accumulate and add up, do teachers simply gain additional (or augmented) skills as they deal (successfully--but in who's terms?) with each sort of context? Or do teachers simply develop highly context-specific practices and rules of thumb that allow them to deal with the particular characteristics of the setting that they happen to be in at the time?

An underlying issue, and one which can only be touched upon here, is that of how we conceptualize "learning" in general. One view, probably the dominant one, can be characterized as the "central processor model" (Laboratory of Comparative Human Cognition, 1982). The basic thrust of this model:

> is to assume that experience operates on the current state of some central cognitive structures (perhaps characterized by stagelike features, perhaps characterized only by level). Each learning experience . . . contributes some increment in power (level, amount) to the central processing machinery that is then deployed to deal with individual performance tasks. (p. 651)

From this perspective, "learning to teach" would be a matter of gradually building integrated capacities (constituted by "rules," "procedures," and general knowledge) which could then be called up or instantiated to deal with problems in any given context. Cognitive abilities, in short, would be conceptualized as context-independent.

An alternative perspective holds that knowledge and skill are primarily "context-specific." As Rumelhart and Norman (1981) put it:

> Our ability to reason and otherwise use our knowledge appears to depend strongly on the <u>context</u> in which the knowledge is required. Most of the reasoning we do apparently <u>does not</u> involve the application of general-purpose reasoning skills. Rather, it seems that most of our reasoning ability is tied to particular bodies of knowledge. (p. 338)

The key issue here, of course, is how broadly we conceive the "contexts" in which knowledge is utilized. Studies of "problem isomorphs" (e.g., Gick & Holyoak, 1980; Lave, 1984; Schoenfeld, 1983) suggest that such "contexts" may

be very narrow indeed, that what we learn in one context may be very difficult to use in another context, even if the two settings share the same abstract structure. The perception of similarities between contexts--and thus the transference of knowledge across contexts--seems to depend upon at least three things (Laboratory of Comparative Human Cognition, 1983): (a) the presence of some system of analogs across different contexts. Assuming that such analogs do exist, transfer may take place through (b) guided instruction, in which someone explicitly points out dimensions of similarity across contexts to the neophyte, and (c) the presence of some sort of lexicon or system of named concepts that encodes culturally acknowledged similarities across contexts.

Whether or not there are analogs across different teaching contexts is an empirical matter still to be resolved. There is simply not an adequate body of information and comparative research to allow us to delineate the precise dimensions of variation in the tasks of teaching across different grade levels, different subject matter areas, and different school and community contexts. It may be the case, and the present study would seem to support this position in part, that such contexts differ so substantially as to make it impracticable or impossible to teach prospective teachers a "knowledge base" which will allow them to deal successfully with the entire range of contexts (or even a large section of it). Nor would one necessarily want teachers to use what they learned in one teaching setting in other teaching settings that differ in crucial ways (in this respect the kinds of context-free lexicons for describing educational processes that are provided to teachers in their formal training may have undesirable effects--suggesting the existence of similarities where there are none in fact).

In such a situation it might well be a more viable strategy to aim teacher education towards the goal of creating "expert novices" -- that is,

prospective teachers with a broad humanistic base of knowledge (rather than specialized pedagogical and content- and context-specific knowledge) who would be capable of adapting to unanticipated or quickly changing settings. In any event, the nature of the differences across the contexts of teaching must be understood before systematic and effective courses of instruction and training can be devised. This is a recommendation to be considered in more detail later, but before this can be done, the issue of teachers' experiences must be pursued a bit further.

Teaching Experience

The preceding discussion has highlighted the potential influences of subject matter structures, teachers' beliefs about the subject matter, about teaching in general, and about their students on classroom practices. The influences of career paths--the ways in they may result in "teaching" becoming a very "entangled domain" for the teacher-- were also touched upon. However, only in passing was any mention made of the long-term effects of teachers' experiences on their practices. When we speak of the "experience" of a teacher, the reference is generally to a very crude sort of measurement: the number of years that the teacher has been in the classroom. The reference here, by contrast, is to the "quality" of teachers' experiences, and the way such experiences shape teachers' "long-term comprehension" (Spiro, 1982b) of the tasks of teaching.

The case studies are suggestive on this point, showing a sometimes bewildering mixture of stability and change. On the one hand, many of the teachers seemed to have been deeply influenced by "critical episodes" in their pasts: teachers who had particularly influenced them (Ms. Marsh and Ms. Cargill), attitudes towards classrooms and teaching that they learned as students (Ms. Skylark and Ms. Hunt); early experiences with students in other types of school settings (Mr. Ralston, Ms. Richards, Mr. Franklin). From such

varied sources, the teachers had developed and retained ways of organizing classrooms or conducting lessons, as well as assumptions about students, and assumptions about the nature of the subject matter areas they were teaching. On the other hand, however, the specific details of what they taught, and the resouces available to them to teach it, frequently changed. Most of the teachers had taught in different schools (with different sorts of student clienteles), at different grade levels, and many had taught different tracks, or even entirely different subject matter areas (some, like Mr. Larson and Ms. Richards, taught more than one subject matter area during the course of a single year: Mr. Larson taught football as well as history and Ms. Richards taught a foreign language course in addition to English).

These sorts of experiences, in addition to making "teaching" resemble an "ill-structured" or entangled domain from the teachers' perspectives, demand that teachers "learn" new ways of teaching as they move from setting to setting. This is perhaps an obvious point, but it is one easily lost or forgotten in discussions of "teacher education" (as in, for example, Lanier's, 1984, review, where only "field experiences" in the course of teacher training are mentioned, and then disparagingly). The reasons for this are clear: Teacher educators have little influence on or control over the kinds of long-term learning experiences teachers have. These are therefore ignored, or, as in the manner of Jackson (1968), Lortie (1975) and others, seen as problems leading teachers to be "atheoretical," "present-oriented," "individualistic," lacking a "technical vocabulary," "scientific modes of reasoning" and so forth. There is an implicit assumption that teachers are this way because of flaws in teacher education, and that what teacher education should do is to teach teachers to be more scientific and reflexive (as the researchers understand these concepts). However, without denying that there may be great

flaws in teacher education, one can question the logical adequacy of these arguments. As Berlack and Berlack (1981) note:

> Though it is widely presumed that experts in flute playing are flutists, Professors Lortie and Jackson and many professional educationalists assume that the experts in teaching are not the teacher but scientifically-trained administrators, or educational scholars who study schooling scientifically.
>
> We are especially wary of "scientific" attributions of irrationality leveled at low-status groups. . . . The quotations offered by Philip Jackson to support his simplicity of thought hypothesis can easily be interpreted as teachers' proclivities to view their schooling problems more contextually than educational researchers.
>
> Although Lortie studies the recruitment and socialization patterns of teachers, their career and work rewards, and what teachers say about teaching . . . he does not study what teachers actually do in classrooms. His failure to collect systematic information on teachers' classroom activities and how teachers construct and justify these activities, does not, in our view, permit him to draw conclusions about how rational, analytic or simple-minded teachers are as they actually perform their profession. Lortie attributes teachers' failures to share their information with each other to the absence of an appropriate technical vocabulary. Is it not shallow, if not arrogant, however, to assume that the measure of persons' professionalism is their use of technical language? (pp. 235-236)

Whatever position one takes with regard to this issue, it would seem important not to merely deplore the fact that teachers learn from experience, but to try to understand and explain why teachers seem to reason and learn as they do from their experiences. The conjecture that will be offered here is that teachers learn "atheoretically" or "contextually" in the course of their experiences because this kind of learning serves them much better than would attempting to learn general theories, rules, or principles about teaching. This is because the general rules or theories are inadequate for dealing with ill-structured domains such as teaching (though there are obvious qualifications here: e.g., some subject matter areas--math--are less entangled than others; while the careers of some teachers may be so stable that teaching over time ceases to be ill-structured--though how this takes place should still be of interest).

To say this is not to say that teachers' modes of learning are "irrational" or even "unscientific." Rather than invoking such pejorative terms, one could argue instead, following Levi-Strauss (1966), that:

> there are two distinct modes of scientific thought. These are certainly not a function of different stages of development of the human mind but rather of two strategic levels at which nature is accessible to scientific enquiry: one roughly adapted to that of perception and the imagination: the other at a remove from it. (p.15)

To enquiry at the level of "perception and imagination," that is, intuitionist equiry, the trial and error techniques of the naive experimentalist, Levi-Strauss (1966) gives the evocative label "the science of the concrete." He explains the term by means of contrasting two practioners of the different modes of science: the engineer (to represent the approach characteristic of what we traditionally regard as "science"), and, to represent the science of the concrete, the "bricoleur" (an untranslatable French term, very roughly corresponding to the English terms "handy-man" or "jack-of-all-trades"). Levi-Strauss points out that whereas the engineer deals with well-defined problems or "projects," the bricoleur has to be able to deal with an unpredictable diversity of tasks. Whereas the engineer can select or develop raw materials and tools specifically designed to allow him or her to solve the kinds of problems he deals with, the bricoleur collects a limited set of versatile tools and materials that can be used for a number of purposes. In Levi-Strauss's (1966) own words:

> The 'bricoleur' is adept at performing a large number of diverse tasks; but, unlike the engineer, he does not subordinate each of them to the availability of raw materials and tools conceived and procured for the purpose of the project. His universe of instruments is closed and the rules of his game are always to make do with 'whatever is at hand,' that is to say with a set of tools and materials which is always finite and is also heterogeneous because what it contains bears no relation to the current project, or indeed to any particular project, but is the contingent result of all the occasions there have been to renew or enrich the stock or to maintain it with the remains of previous constructions or destructions. The set of the 'bricoleur's' means cannot therefore be defined in terms of a project (which would presuppose besides, that, as in the case of the engineer, there were, at least in theory, as many

> sets of tools and materials or 'instumental sets,' as there are different kinds of projects). It is to be defined only by its potential use, or putting this another way and in the language of the 'bricoleur' himself, because the elements are collected or retained on the principle that 'they may always come in handy.' Such elements are specialized up to a point, sufficiently for the 'bricoleur' not to need the equipment and knowledge of all trades and professions, but not enough for each of them to have only one definite and determinate use. (pp. 17-18)

In short, the activities of the engineer and the bricoleur (or the imaginary "scientific" teacher versus the teacher who learns from experience) "differ not so much in kind as in the different types of phenomena to which they are applied" (Levi-Strauss, 1966, p. 13). The engineer takes on a well-structured task environment armed with abstract rules and principles from which practices and activities are generated. The bricoleur faces an entangled domain, armed with practices or bits and pieces of practices which have seemingly proved effective in the past. As Levi-Strauss (1966) puts it, somewhat more abstractly:

> Now, the characteristic feature . . . of 'bricolage' on the practical plane is that it builds up structured sets, not directly with other structured sets [i.e., it doesn't create abstract systems from abstract systems] but by using the remains and debris of events: . . . odds and ends in English, fossilized evidence of the history of an individual or a society. [The] 'bricoleur' builds up structures by fitting together events, or rather the remains of events, while science, . . . creates its means and results in the form of events, thanks to the structures which it is constantly elaborating and which are its hypotheses and theories. But it is important not to make the mistake of thinking that these are two stages or phases in the evolution of knowledge. Both approaches are equally valid. Physics and chemistry are already striving to become qualitative again, that is, to account also for secondary qualities which when they have been explained will in their turn become means of explanation. . . . We . . . [distinguish] the scientist and the 'bricoleur' by the inverse functions which they assign to events and structures as ends and means, the scientist creating events (changing the world) by means of structures and the 'bricoleur' creating structures by means of events. (pp. 21-22)

The function of experience, then, is to provide the elements of the teacher's repertoire of practices (the "events" from which the teacher builds classroom structures). These events and their consequences and uses are encoded as "critical episodes," "signature feelings," and the like--that is,

they are encoded according to their particular past uses and effects, and the teachers reactions and evaluations to those effects. To quote Levi-Strauss (1966) once more:

> Consider [the bricoleur] at work and excited by his project. His first practical step is retrospective. He has to turn back to an already existent set made up of tools and materials, to consider or reconsider what it contains and, finally and above all, to engage in a sort of dialogue with it and, before choosing between them, to index the possible answers which the whole set can offer to his problem. He interrogates all of the heterogeneous objects of which his treasury is composed to discover what each of them could 'signify' and so contribute to the definition of a set which has yet to materialize but which will ultimately differ from the instrumental set only in the internal disposition of its parts. A particular cube of oak could be a wedge to make up for the inadequate length of a plank of pine or it could be a pedestal--which would allow the grain and polish of the old wood to show to advantage. In one case it will serve as extension, in the other as material. But the possibilities always remain limited by the particular history of each piece and by those its features which are already determined by the use for which it was originally intended or the modifications it has undergone for other purposes. (pp. 18-19).

The general point of this metaphor (between the "bricoleur" and teachers) is that teachers learn from their experiences (and hence, tend to tell interviewers that their field experiences have been more valuable than their experiences in colleges of education), not because they lack analytical turns of mind or technical vocabularies, but because they employ a strategy of "scientific" thought well suited to habitually dealing with the entangled domains they work in. In some respects this argument parallels conclusions which others have arrived at from different routes. Greene (1979), for example, suggests that:

> No matter how practical, how grounded our education courses were, they suddenly appear to be totally irrelevant in the concrete situation where we find ourselves. This is because general principles never fully apply to new and special situations, especially if those principles are thought of as prescriptions or rules. . . . We forget that, for a rule to be universally applicable, all situations must be fundamentally alike; and, as most of us know, classroom situations are always new and never twice alike. Even so, we yearn sometimes for what might be called a "technology of teaching," for standard operating procedures that can be relied upon to "work." Devoid of these, we project our frustration back upon whatever teacher education we experience. (pp. 27-28)

The problem with formulating the matter in these terms is the metaphysical assumption that different classrooms are inherently different in crucial ways and that the nature and sources of these differences are unsystematic and unknowable (for this is the force of the rhetorical device of appealing to cultivated common sense--"as most of us know"--rather than substantiating the point with evidence or argument). This is not the conclusion that one should draw from the present report. The report does argue that teaching is an "entangled domain," and suggests that it is entangled because of the great diversity of settings within the domain--different schools, different grade levels, different subject matter areas, and so forth--and because teachers experience multiple manifestations of these settings in the course of their careers. To manage these difficulties, teachers rely on loosely bounded conceptual systems (beliefs) which help them define tasks where the situation itself presents no clear task or no feasible task. To deal with these tasks, teachers act as naive empiricists or "bricoleurs" in constructing repertoires of teaching practices.

In all of this there is no intention to assert that teaching is inherently or immutably entangled: conceivably one could routinize the profession and the settings within it, institute strict controls over the career paths of teachers within the profession, and introduce training systems to specialize teachers in the very particular and discrete subfields. Medicine and law are examples of professions which have disentangled themselves in such ways.

However, teaching does not seem a likely candidate for a similar transformation, and this leaves teacher educators and researchers in a difficult position. For if the aim is to produce forms of teacher education and models of teaching practice which might be useful to teachers in the course of their work, we have to understand that work better. This means that

we have to learn the dimensions of variation--and their sources--which make one classroom different from another. This in turn means abandoning the preoccupation merely with what goes on in the classroom and looking instead at how schools differ from one another in the types of constraints and resources they provide to teachers, how the nature of teaching as a profession leads teachers from one school to another or from one subject matter area or grade level to another; at how particular classrooms fit into the routines and daily lives of teachers; it means understanding the nature of the subject matter areas and the place of particular courses in the trans-grade curriculum. It means, finally, understanding the beliefs and experiences that teachers use to generate goals and make sense of their actions. We need, in short, to redefine our focus from "teaching" conceived of as a homogeneous or well-ordered system of practices, to "teachers' work," conceived of as a heterogeneous or deeply entangled set of practices. This is not a retreat from the goal of disentangling the domain--it is the necessary preliminary step to achieving that end.

APPENDIX A: SELECTION OF PARTICIPATING TEACHERS

Because of the potential intrusiveness of the study (e.g., the use of videotaping equipment in the classrooms), and the large commitment of time required of the teachers (usually two after school interviewing sessions per week over the course of a 12 week semester), teacher participation in the study was strictly voluntary and teachers were selected only after they had been well informed of the demands of the study (a practice which, however, resulted in very few volunteers in each school). To this end, the TBS staff, after gaining permission to conduct the studies from district officials and the site principals, made presentations to faculty meetings explaining the purpose of the study, its procedures and methods, the criteria for selecting teachers, the time commitments that the teachers would have to make, and so on. After the presentations, teachers were given an opportunity to ask questions about the study. Those teachers who expressed an interest in participation were asked to complete survey forms which requested information on their ages, sex, educational backgrounds, teaching experiences, and current class schedules.

Selection Criteria. The initial criteria used to select prospective teachers for the study included the following:

1. The teachers had to teach seventh or eighth grade classes at the "average" ability level (or "normal" or middle "track"--the idea was to avoid both honors and remedial classes).

2. Participants had to be teachers of major subject matter areas (i.e., mathematics, social studies or history, science, or English).

3. The teachers had to be experienced, preferably with at least two years experience in their present schools.

4. Participants had to be able to allocate time for interview sessions at least twice a week after school or during their conference periods.

Teachers who satisfied these criteria and expressed interest in participating were contacted individually by project members and preliminary observations of their classrooms were scheduled. The teachers were observed at least twice, with the observations focusing on the student composition of the classroom, the instructional format followed, and the teachers' systems of classroom management. The goal of these observations was to identify teachers reflecting a broad range of practices in classrooms with student bodies representative of the school as a whole. Following these observations, project staff members met and selected participants. (Principals' recommendations were also solicited and used--though at one of the sites the principal refused to comment on his teachers). As the study progressed, attention was given to balancing the samples across schools in terms of subject areas and grade levels, that is, to make sure that we would be able to compare, say, a teacher of eighth grade English at one site to a teacher of eighth grade English at another site). Once selection decisions had been made, all teachers who had completed survey forms were notified of the selections and were thanked for taking an interest in the study. In all, eight teachers participated in the TBS.

It should be noted that this sample, because of its small size and the nature of the selection process, is not representative of the total faculties of the schools, the faculty of particular subject matter areas, or the faculty at a given grade level (except at Countryside, where there was only one faculty member per subject matter area per grade level). Nevertheless, the data are richly suggestive and provide many insights in the structures and functions of teachers beliefs.

One final point which might be made with regard to teacher selection has to do with the fact that there were no controls over the "effectiveness" of the participating teachers. The issue here is an important but neglected

one, and while this is not the place to consider it in depth it may be useful to offer a few schematic remarks.

There is a popular view in research on teaching--it may well be the dominant view--that the object of research is to isolate "effective practices" and that to this end one should study only "effective teachers." Brophy (1980) states this position quite bluntly:

> Although it may be true that planning, thinking, and decision making of all teachers are equally interesting and valid as subjects of scientific study, I maintain that information from and about certain teachers is of much more value than that from and about other teachers. In particular, as someone interested in identifying successful teaching practices (not merely in describing the variation that exists), I advocate studying teachers who are both experienced (a minimum of three years) and effective (according to objective criteria). (p. 49)

There are some bizarre epistemological assumptions here. Brophy seems to think that it is possible to elucidate those aspects of teachers' thought processes which lead to "objectively" "effective" practices by studying only "effective" teachers, and that the only value of studying "ineffective" teachers is to "describe variation." The background assumption underlying these views can only be that the goal of research on teacher thinking is in some way to correlate aspects of teachers thought processes with some measure of "effectiveness." It is, in short, a way of reincarnating process-product research in the guise of research on teacher thinking ("process" here being things like the rate at which teachers make decisions, "product" being the "effective" practices identified in previous process-product research). There is no interest in understanding where and how these thought processes originate or <u>why</u> they lead to "effective" practices--presumably important issues if the object of research is the improvement of teaching.

Even granting Brophy's definition of the research agenda, his strategy is highly problematic. In the first place, because there is no basis of

comparison from which to analyze the different functions of modes of thought in different instructional systems, there is an enormous pressure towards lines of interpretation which hold that things are the way they are because they had to be that way: if the teachers are initially defined as "effective" then whatever we determine their thought processes to be will be defined as "effective thought processes." Secondly, there is an implicit pressure towards searching for quantitative measures of aspects of thought processes -- as opposed to developing models of how teachers think -- thus, the popularity of the meaningless counts of "frequency of decisions." Finally, there is the assumption that the goal of research on teaching is to produce a set of recipes or rules which can then be presented unproblematically to teachers as guides for their actions. There is no recognition of the pedagogical problems of teacher training.

The idea that studying "less effective" serves merely to "describe variations" in the population of teachers is apparently a rejection of the comparative methods that have served as underpinnings of social science research at least since J.S. Mill's System of Logic (1869). The premise behind the comparative method is that entities and their operations can only be understood by contrasting them to other entities which resemble them in some respects, but differ in others. This is the mode of logic underlying a wide range of research practices, from the "distinctive features" technique of linguistics to the comparative methods of historical sociology. Indeed, would any serious program of research in any field purposefully ignore fundamental dimensions of variation in the phenonmena it examines? Comparative research does not merely serve to describe variation, it also allows us to see better the operations of systems by showing us the various forms they can take, the various functions they can perform, and how failures of different components of the system affect the system as a whole. This is

point which has been stated many times, though rarely so elegantly as in the words of William James (1902):

> It always leads to a better understanding of a thing's significance to consider its exaggerations and perversions, its equivalents and substitutes and nearest relatives elsewhere. Not that we may thereby swamp the thing in the wholesale condemnation which we pass on its inferior congeners, but rather that we may by contrast ascertain the more precisely in what its merits consist, by learning at the same time to what particular dangers of corruption it may also be exposed. (p. 22)

APPENDIX B: THE REPERTORY GRID INTERVIEW TECHNIQUE

Different methodologies for studying teacher thinking produce very different kinds of information about teachers' thoughts (Calderhead, 1983). It is often difficult to determine whether these differences: (a) represent fundamental differences in the ways teachers think, (b) reflect the fact that methods tap different facets of teachers' thoughts, or (c) mean that findings about thoughts are simply methodological artifacts. Very likely all three statements are partially true. There are, at any rate, no simple ways around the problem of the ambiguous link between method and data. This is not due simply to "inadequacies" in the methods, but to the fact that methods are themselves (or are aligned with) theories about reality.

As has been thoroughly argued from a variety of perspectives (see e.g., Feyerabend, 1978; Hanson, 1958; Kuhn, 1970; Stegmüller, 1976) all "data" or "observations" are themselves "laden with theory." There is no "observation language" distinct from and autonomous of a "theoretical language." Observations cannot be used to "test" theories because they are themselves products of theories. It follows, therefore, that to understand the meaning of evidence one must understand the theoretical underpinnings of the methods that produced it. In the following appendices, then, the two primary information gathering techniques of the TBS -- repertory grid interviews and stimulated recall interviews -- are described in some detail and their underlying theoretical assumptions are critically evaluated.

The Repertory Grid Technique

One of the major sources of data for the Teacher Beliefs Study was the set of four "repertory grid interviews." Although this type of interview has come to be used with some regularity in educational research (see, e.g.,

Ball, 1981; Munby, 1982a,b; Nash, 1973; Olson, 1980; Taylor, 1979), it had its origins in the clinical psychology of George Kelly (1955). However, most of research on education which has utilized the technique has done so without embracing Kelly's theory. As Nash (1973) puts it: "I am yet to be convinced that [Kelly's theory] is as useful as its principal research tool the repertory grid. The grid technique seems to stand well on its own" (p. 40). That it should be so is not entirely surprising, since the repertory grid technique is essentially an amalgamation of two methods (a sorting task and factor analysis) with long histories and wide currency in psychological research. However, as shall be described, it is not so easy to dismiss the theories upon which methods are premised and still use the methods. To begin the discussion, the basic outlines of the interviews and their concrete applications in the TBS are described.

The general framework. In its broadest outlines, the repertory grid technique consists of three stages. In the first, subjects are presented with sets of objects, or, in the case of the teachers we worked with, index cards naming or describing people, events, or situations which the teachers were familiar with. The subjects are then supposed to sort these "elements" into groups that are "alike" or "similar" or "go together" in some way. This is readily recognizable as the kind of sorting task widely used to study the psychology of classification (see e.g., Cole, Gay, Glick, & Sharp, 1971; Inhelder & Piaget, 1964; Vygotsky, 1962). The repertory grid technique differs from these traditional methods in that there are generally no explicit presuppositions about the diacritica that the subjects may use to distinguish the elements being sorted. That is, the repertory grid interviewers do not intentionally attempt to embed a finite set of potential distinguishing characteristics in the elements to be sorted. Rather, the

aim of the interview is to discover the types of diacritica that invididuals use to categorize and classify aspects of their everyday environments. It is necessary, however, for researchers using the technique to make some a priori decisions about the types of elements that the subjects are to sort in the first place (or the ways these elements are to be elicited).

The second stage of the repertory grid interview is closely related to Kelly's own psychological theory. Kelly (1955) propounded a theory of "personal constructs" which can be viewed as a peculiar anticipation of modern "constructivist" approaches in cognitive psychology (see e.g., Spiro, 1980). In Kelly's view, people actively interpreted and made sense of their social environments by viewing them through psychological lenses or "constructs" (a term roughly analogous to "concepts" or "schemata"). However, a distinctive feature of Kelly's approach, separating him from other constructivist theorists, is his insistence that "constructs" are "bipolar" entities. That is, in Kelly's view, each construct or concept is cognitively paired with another construct which is its opposite or mirror image. Bearing this point in mind, we can make sense of the next step in the repertory grid technique.

After the elements have been sorted, the interviewer has the subject explain or describe the diacritica that underlie the sorting (in some variations of the technique the subjects are asked to resort, or subdivide their initial sorted groups, but the principle remains the same). The categories or criteria used to distinguish the groups are taken as the "constructs" that the subjects hold about those elements. These constructs and the elements used in the sorting are then used to construct a "grid." The constructs go along one axis and the elements along a second. The subjects are then asked to "rate" the elements in terms of the constructs. For example, in the TBS (following Munby, 1982a), if an element was

"positively associated" or "positively related" (the terms vary in the research literature) to a particular construct, the subjects were asked to give the element a numerical rating of, say, three. If the element was "negatively associated" with the construct, it was given a rating of one. If there was simply no connection between the element and the construct, if the construct was inapplicable to the element, the rating given was a two (the numbering systems used in grid construction vary in the literature. For example, plus-one, minus-one, and zero are sometimes used instead of the three, one, two system described above.). This practice of having the subjects rate the elements and constructs in terms of "positive" or "negative" associations clearly flows from Kelly's notion of the bipolar nature of "constructs." By rating the elements and constructs in this way the subject is supposedly revealing whether a given construct is used in the comprehension of the entity represented by the element, or whether the opposite of that construct is used, or whether neither version of the construct is used. There is thus no way to specify that a construct is used to interpret an entity only sometimes, in some situations, for particular purposes; or to note that the meaning of a construct may vary in subtle ways as it is applied to different elements. Researchers who embrace the repertory grid technique without accepting Kelly's underlying theory have not supplied an alternative theory to explain the meaning of the ratings made on the grid. That the grid has been used in spite of this can be explained as a function of the desire of researchers to move to the third stage of the repertory grid technique: the factor analysis of the constructs.

After the grids have been completed, the numerical ratings are used to perform a factor analysis on the constructs. Factor analysis, and related

techniques such as "componential analysis" (Spradley, 1981), are well established methods of reducing complexes of correlations or relations into a smaller number of dimensions. Say, for example, that a teacher has sorted through 35 cards representing the students in one of his of her class periods and has produced 15 concepts or constructs for describing or categorizing those students. We assume that these constructs are not cognitively segregated and we want to know if there are underlying "meta-categories" or "meta-constructs." One way to go about this is to correlate the ways the students are rated in terms of the constructs. For example, if the teacher had two constructs such as "intelligent" and "well-behaved" to describe his or her students, we could check to see if the students had received similar ratings (on the repertory grids) in terms of these two constructs--we could see if the constructs were correlated. If there were only two constructs, there would be no need for the factor analysis. However, if the teacher had 15 constructs the correlation matrix would become quite large and difficult to deal with. Factor analysis is a tool to reduce this complexity by lumping together constructs that have been rated in similar fashions on the repertory grids. The researchers can then interpolate some underlying relationship which links the constructs or, as in the present case (following Munby, 1982a), the subjects can be reinterviewed to determine their views about possible relationships among constructs.

TBS applications. The discussion above is meant merely to introduce the reader to the repertory grid technique. There are many issues and problems arising from the use of this technique to study teachers' thinking, and these will be examined later in this appendix. First, however, the repertory grid interviews of the TBS are briefly described.

Four different interviews of the TBS employed repertory grid techniques, though each in a different fashion. These interviews will be

referred to in terms of the general substantive domains they were intended to cover: "Teachers' Beliefs about Teaching," "Teachers' Beliefs about Students," "Teachers' Beliefs about Student Misbehavior," and "Teachers' Beliefs about Administrative and Community Influences."

1. Teachers' Beliefs about Teaching. This interview was designed to identify teachers' beliefs about teaching and learning and was closely modeled on the technique used by Munby (1982a). In this interview the elements to be sorted by the teachers were not constructed by the researchers prior to the interview, but were elicited from the teachers at the beginning of the interview.

The elicitation process began with a general, unstructured series of questions concerning the teachers' personal histories, professional backgrounds, and experience (in large part, the purpose of this segment was more to get background information on the teachers than to elicit elements for the sorting task). Following a script, the interviewers then informed the teachers that the remainder of the interview would focus on their thoughts about the kinds of things that went on every day in their classrooms. The teachers were asked to describe what someone might hear or see if they were to visit their classrooms on a typical day. As the teachers spoke, the interviewer made brief notes on index cards of the events, situations, interactions, or tasks being described. Occasional prompts (e.g., "how do you begin class?") were used if the teachers remarked that they were having trouble bringing to mind the kinds of things they did in class. When the teachers felt that they had sufficiently described their classes, the interviewers laid out the index cards in front of the teachers and asked them to look over the cards to see that the interviewer had taken down all of the components that the teachers had mentioned. At this point, the teachers

sometimes thought of new components (and these were added on index cards), decided that listed components were not particularly salient after all, or requested that the interviewers reword the descriptions on the cards. When the teachers were satisfied with the corpus of elements on the index cards, they were then asked to sort the cards into groups. The instructions given to the teachers at this point (and in the sorting tasks of the other interviews described below) went as follows:

> What I would like for you to do now is to take the cards and group them in ways that you think belong or go together. You may have as many groups as you like. Even though you are going to have an opportunity to explain your groupings when you have finished, it would help me if you would sort of "think out loud" as you are sorting the cards. Don't feel pressured to come up with an explanation, but it would help us if you could tell us what's going on in your mind as you are grouping. Please don't hurry; take as much time as you need.

When the sorting task was completed, the teachers were asked to explain the bases for their groupings. If the teachers had difficulty with this task, prompts were used: for example, the teachers might be asked to compare different groupings and describe how they differed, or they might be asked why a particular element would belong to one group rather than another.

The explanations teachers gave for their groupings became the "constructs" that were used on the repertory grid itself. The griding task took place in a separate interview that usually followed the initial sorting interview by a few days. After the grid was collected and factor analyzed (using a principal components factor analysis with varimax rotation, Veldman, 1978), the results were taken to the teachers who were asked to comment on the groupings of constructs represented by the factors.

2. Teachers' Beliefs about Students. The most common use of the repertory grid in educational research has been to examine teachers' perceptions of students (e.g., Ball, 1981; Nash, 1973. Other researchers,

e.g., Morine-Dershimer, 1978-79, have used essentially identical sorting tasks, without, however, going on to do the griding or factor analysis.). For the TBS, the purpose of this repertory grid interview was to elicit the teachers' beliefs about or schemes for classifying their students. The interview began with a series of general questions concerning observations the teachers had made about their students since the beginning of the school year. For example, the teachers were asked "How do your classes this year compare with your classes last year?" After this preliminary general discussion, the teachers were presented with the sorting task. The "elements" the teachers were asked to sort were the names of their students in the class period being studied. The designation of constructs, the griding, and the factor analysis were done in the same fashion as in the interview described above.

3. Teachers' Beliefs about Student Misbehavior. With this interview, the TBS moved away from ground previously covered by other researchers using the repertory grid technique. The interview was designed to provide some idea of the way in which the teachers viewed student misbehavior. It began with questions about student conduct in the teacher's classes. For example, the teacher was asked "What are some typical student misbehaviors that bother you the most in your classroom?" The basic set of elements the teacher was asked to sort consisted of thirty examples of student misbehavior (e.g., "not following dress code or grooming code," "running in hall," "stealing," and "gum chewing"), drawn by the researchers from two sources: the student handbooks of the schools under study and examples of student misbehavior found in classroom observation protocols from previous work of the project. Behaviors not included on the cards but mentioned by the teachers in the preliminary phase of the interview were added to the

elements to be sorted. The teachers were also asked to examine the cards and remove any misbehaviors that they had not had first-hand experience with. The remaining portions of this interview resembled those described for the interviews above.

4. Teachers' Beliefs about Administrative and Community Influences. The purpose of this interview was to explore the teachers' beliefs about the administrative organization of the school and about the communities served by the schools. The interview also focused on the teachers' beliefs about how the school administration and the community did or did not influence their classroom practices. This interview entailed a rather extended "element elicitation" stage. The first part of the interview was relatively unstructured and consisted of a series of questions concerning administrative policies, work conditions, staff development, community characteristics, and the home life of the student. This portion of the interview generally ran one and one-half to two hours. The researchers then met and listened to the interview tape in order to construct the elements that would be used in the sorting task which took place in the next interview. The sorting, griding, and factor analysis stages of the interview then progressed in the same manner as in the interviews described above.

Assumptions underlying the repertory grid interviews. The use of the repertory grid technique to study teacher thinking is relatively recent, and the TBS both drew on established uses of the technique and attempted some innovations of its own. It seems worthwhile, then, to critically assess both the advantages and disadvantages of the technique. This review will follow the general outlines of the interview itself, beginning with the elicitation

and sorting tasks, then touching on the griding task, and finally discussing the uses of the factor analysis.

The sorting task. The sorting task of the repertory grid can be looked at as a very nondirective sort of interview. For example, instead of directly asking a teacher "Why do you begin class by going over the objectives written on the chalkboard?" or "Why do you have students read aloud from the textbook?," the teacher would be presented with index cards with descriptions of such activities written on them. The teachers are asked to organize the cards in ways that are meaningful to them, then to describe the underlying similarities among the cards grouped together, and finally to describe the diacritica distinguishing the different groups. Ideally, this would work as a means of getting the teachers to talk about these things without influencing the way they talk about them by a particular framing of a question.

In Kelly's (1955) work, the theoretical rationale for the sorting technique is clear. He assumes that: (a) people have a relatively small (at any rate finite) and stable set of bipolar concepts or "constructs" with which they organize and make sense of domains of reality; and (b) people must use these categories to talk about objects or entities belonging to these domains.

Both of these assumptions seem highly questionable in light of current psychological research. In the first place, "constructs" or schemata cannot be treated as static, bipolar (Rumelhart, 1980), or context-independent (Rumelhart & Norman, 1981). Concepts or schemata are not so much entities which can be elucidated through experimental techniques as they are devices or procedures for comprehension which are adapted to particular contexts and uses.

In the second place, even if one granted Kelly's notion of "constructs" there is no reason to assume that people could let alone must use them when sorting index cards. Cognitive processes may operate below the level of conscious awareness (Nisbett & Wilson, 1977) and in any event seem to be task-specific (LCHC, 1982). That is, the results of the sorting tasks will show us what the teachers think about as they sort the cards, but this may have little relationship to the ways they actually think while they teach.

Finally, there is no apparatus or guide in Kelly's framework to allow one to identify "domains." That is, there are no theoretical rationales for determing what kind or range of events can be represented on the cards the subject sorts. In practice (e.g., Munby, 1982; Nash, 1973), researchers supply the domains (e.g., classrooms, students) and assume that they have some psychological validity for the experimental subjects (no reasons, compelling or otherwise, are provided for these assumptions).

These theoretical problems have practical implications. It seems almost certain that in many cases the "concepts" emerging in the sorting tasks were artifacts of the interview task. For example, when asked to group "elements" in the repertory gird interviews of the TBS, teachers frequently asked such questions as "How do you want me to group them?," "What do you want me to group them in terms of?" The interviewers avoided giving the teacher directions, but this sometimes led to quite banal groupings. For example, teachers would group the cards in terms of things that happened "frequently", "seldom", "regularly"; things that "happened at the beginning of class" as opposed to "the end of class", and so on. One would be hard pressed to argue that these diacritica are the "concepts" or

beliefs underlying the teachers' practices. Instead, they are more than likely the result of the teachers' interpreting the task differently than the researchers intended.

This problem exists even if the teachers produce diacritica or grouping rationales which seem profound and interesting to the researchers: On what basis can we assume that these represent anything more than the teachers' responses to the task? The teachers may see similarities among activities or students when sorting the cards, but what is the theoretical rationale for assuming that these explanations correspond to beliefs that existed before the sorting task, or that they have any relationship to what the teachers do in the classroom? We can try to compare the teachers' discussions in these interviews with their classroom practices and their discussions in the stimulated recall interviews, but there are limits on the extent to which this sort of "triangulation" can be carried out.

The griding task. The griding task, in the TBS, was the most problematic aspect of the repertory grid technique. One problem was that, as the griding task usually took place some days after the original sorting interview, it was sometimes the case that the teachers forgot what they had originally meant by their constructs. (The wording of the constructs, no matter how closely the interviewers tried to model it on the words used by the teachers, was usually extremely abbreviated, almost cryptic.)

A more pervasive problem was that the meaning of the numbers used in the grids seemed to confuse the teachers. The number 3 was supposed to represent a positive correlation, the number 1 a negative corrleation, and the number 2 a zero correlation. However, although the teachers were asked to talk as they filled in the grids, and attempts were made to to steer them towards the proper interpretation of the ratings, it is still almost certain that a frequent interpretation of the numbers was: 1 = not related; 2 =

somewhat related (or "related in some contexts"), and 3 = definitely related. A related problem stemmed from the fact that in many cases the three possible relationships on the grid did not seem adequate to the teachers (e.g., constructs and elements that were positively associated in some contexts and negatively associated in others).

Having the teachers speak aloud as they filled in the grids also revealed that the meanings of the constructs sometimes changed over the course of the griding task. For example, a teacher filling in the grid on "student characteristics" might have a construct like "intelligent." The meaning of "intelligence," however, might change from student to student. For example, it might mean something like "makes good grades" in one case, and something like "natural ability" in another. One could get around this by incorporating "makes good grades" and "natural ability" into the construct axis of the grid. However, in most cases the sub-divisions of meaning were not so clear cut nor so simple. Aside from this, there would also have been considerable practical difficulties in constantly changing the grids as new "constructs" emerged (the new distinctions often did not come to light until the griding task itself--that is, they didn't appear during the sorting task. It would not have been practical to ask the teachers to do the griding task over and over as new constructs appeared).

Again, the griding task is based on the theoretical assumptions that constructs or concepts are bi-polar and static across a domain. The difficulties of the teachers (as well as most current research on cognition) suggests that this is not the case. Why is it still used?

The factor analysis. One answer is that the grid allows one to use factor analysis to collapse the usually large sets of constructs or concepts. Factor analysis in itself is simply a statistical technique for

simplifying correlation matrices. Conceptual difficulties stem not from the method but from the common way of interpreting the results it produces. The difficulty can be stated simply: while it is commonly recognized that correlations, in and of themselves, cannot be taken as evidence of causal relationships, "factors," which should be treated with the same caution, are instead generally given causal meanings or are reified and treated as if they signified real objects (see discussion in Gould, 1981). This is usually done when the researcher "labels" the factors--that is, infers an underlying connection between the components of the factor. In the TBS this was avoided to some extent by simply presenting the teachers with a simplified explanation of the results of the factor analysis and asking them to discuss the factor groupings. However, while in some cases teachers did conclude that the factors made no subjective sense, others seemed to feel constrained to produce some rationale for the factors, whether or not such a rationale had existed prior to the interview.

A more fundamental problem is that the application of factor analysis (or other mechanical ways of reducing qualitative data, such as "componential analysis," recently popularized by Spradley, 1981) to human concepts or cognitive categories is based on problematic assumptions about the nature of human conceptual systems. The methods seek to define or identify concepts or categories by finding a minimum number of criterial attributes (i.e., "decomposing" complex events or structures into semantic features or underlying "factors"). However, a growing body of research suggests that categories and concepts cannot be defined by sets of criterial attributes, and that category and concept boundaries are not absolute (Mervis, 1980; Rosch, 1975). Such findings render the psychological status of the "factors" and "components" highly ambiguous: Do they capture parts or aspects of the individual's conceptual system, or are they simply epiphenomena of the

methods? The problems with the repertory grid method outlined above suggest that the latter is the most likely case. In any event, the preceding discussion should have made clear that the techniques one uses are based on theoretical foundations that should be explicitly acknowledged and evaluated if the nature of the evidence produced is to be well understood.

For purposes of summary report, the repertory grids will therefore be treated as open ended interviews conducted by means of the sorting tasks. These segments of the interviews produced rich discussions of teachers' beliefs and views of teaching, students, student misbehavior, and the school environment. However, the repertory grids, and the factor analyses of the grids, will be regarded as suspect and will not be used as primary data sources.

APPENDIX C: THE USE OF STIMULATED RECALL TECHNIQUES IN THE TEACHER BELIEFS STUDY

The most commonly used procedure for studying teachers' thoughts about concrete instances of classroom instruction is the "stimulated recall" interview (Clark & Peterson, in press; Shavelson & Stern, 1981). "Stimulated recall" is, in fact, a blanket term for a variety of interviewing techniques in which questions are based on mechanical records (e.g., videotapes) of actual classroom activities. Teachers are asked to examine these records (e.g., watch the videotapes) and describe they were thinking about at various points during the class.

This section describes the procedures used by the TBS program in conducting stimulated recall interviews. As the TBS used videotapes of classrooms to stimulate the teachers' recall, videotaping techniques are described first. General characteristics of the interviews (e.g., the setting of the interviews); and details of the interviews themselves (e.g., questioning strategies) are then discussed.

Videotaping. Stimulated recall interviewing, as presently practiced, would be impossible without mechanical devices such as sound and image recorders. These devices can provide more comprehensive and complete records of classroom processes than human recorders (thus providing what should be a more accurate "stimulus" for the interviews) while the mechanical process itself automatically produces a record that is semi-permanent and easily and immediately reviewable. Human-produced field notes, by contrast, have to be reworked before they can serve as presentable interview guides. This time lag reduces their potential usefulness for

obtaining accurate reconstructions of the mental processes underlying the actions represented in the records.

Given the crucial role of recording technology in research using stimulated recall data, one might expect to find a large literature on the use of video equipment for these purposes. However, discussions of videotaping for stimulated recall practices are generally restricted to superficial descriptions of camera and microphone placement and discussions of methods for introducing teachers and students to the equipment (e.g., Conners, 1978). Thus, much of the TBS videotaping methodology had to be developed through trial and error processes revolving around the issues of placement of camera and use of moving versus fixed camera. It should be noted that many of the problems discussed here would appear in a different light according to whether researchers used a single camera (as the TBS) did, or two (or more) cameras mixed or displayed on a split-screen. The discussion here pertains to use of a single camera only.

1. Camera placement. The videotape used in a stimulated recall will reveal a different stimulus (and presumably elicit a different recall) depending on whether it is produced from the front, side, or back of the room (usually, to avoid intrusiveness, the camera is placed in the corner of a room or along the side of the wall). The TBS first used a rear camera placement, then switched to a front placement, and finally ended up filming from the side of the room. Because the teachers who were being filmed also changed, there are no clear-cut conclusions about the relative merits of the different placements. However, the following observations and speculations can be made with some amount of conviction based on our experiences (these comments apply to the types of unsolicited comments the teachers made).

First, the placement of the camera in the rear of the room, a placement which tends to put the teacher in the camera frame at all times, showing only a portion of the students (from the back), seems to engender a considerable amount of self-evaluation on the teachers' part. That is, they note and comment on their appearance, the expressions on their faces, their feelings and affective states during the course of instruction.

Second, placement of the camera at the front of the room, a placement which shows a large proportion of the students (from the front), but relatively little of the teachers (except for those teachers who move about their rooms a great deal), tends to engender more teacher comments about student behaviors, individual student characteristics, the flow of classroom interaction, and the like, than did back-of-the-room camera placement.

Finally, in an attempt to avoid the two extremes mentioned above, we tried placing the camera at the side of the room. The assumption was that would allow us to shift the focus of the camera relatively easily from teacher to students and to get more or less frontal images of both. This strategy, however, exacerbates the problem (also present with the other camera placements) of how best to manage camera movement.

2. Moving the camera. In the TBS experience, the camera frame, no matter what type of lens is used or where the camera is placed, cannot encompass the entire classroom. There will always be some students, or the teacher, out of the camera frame. [Following Sutcliffe & Whitfield, 1979, the TBS experimented with using a camera fitted with a wide-angle (6.5 mm) lens mounted on a high tripod at the front of the room. This did allow us to capture almost all of the people in the room, but only at the price of what both teachers and researchers felt was a distorted visual image making it

difficult to determine what students far away from the camera were doing]. Focusing the camera on particular areas of the room thus constitutes a form of editing (Erickson & Wilson, 1982). Researchers who have used stimulated recall are generally silent about the issue of how to aim the camera.

The most useful advice on camera movement comes from Erickson and Wilson's (1982) discussion of videotaping in microethnographic research. They suggest that the camera should "keep within the visual frame all the interacting individuals in the event" (p. 43). However, such a strategy can cause problems in stimulated recall research. Teachers may not be aware of all of the interaction taking place as the class proceeds. Seeing this interaction later on the videotape can produce spurious self-reports (as the teachers try to retrospectively make sense of their actions); can make the teachers defensive in the interview (if something undesirable is shown that they missed during the class); or can have unintended intrusive consequences (as when one of the teachers we interviewed saw a student making fun of him on the tape--he had missed this in the class--and promised to "get" the student in the next class).

Recognizing the necessity for discretionary decision-making in aiming the camera, most commentators (e.g., Erickson & Wilson, 1982; King & Tuckwell, 1983) recommend that those operating the cameras should be the fieldworkers themselves. TBS experience bears this out. However, we would question the suggestion (made, for example, by King and Tuckwell, 1983) that the camera operator also be responsible for constructing fieldnotes on the class at it unfolds. Our own experience suggests that simultaneously operating the camera and constructing comprehensive fieldnotes is very difficult. Furthermore, having a note-taker stationed in a part of the room away from the camera often provides a very different perspective on

classroom events than that revealed by the videotape (note also Corsaro's, 1981, discussion of the need for extensive ethnographic observation prior to videotaping).

In trying to plot a course around the obstacles described above, the TBS finally developed the following framework for videotaping.

To minimize the influence of external factors on subjects during videotaping and during stimulated recall sessions, familiarization activities were conducted. Students and teachers were introduced to the videotaping equipment two weeks prior to the first scheduled videotaping session. The video operator and the classroom observer introduced themselves to the classes and provided the students with an overview to the study and its procedures.

The videotaping equipment was set up in the classroom and tested prior to the first videotaping session. As already described, camera locations were selected with the aim of obtaining the best possible view of the classroom while causing minimal obstruction for normal classroom activity (for our purposes, this was the side of the room towards the back, but not in the back corner).

The videotaping equipment consisted of a 3/4" videotape recorder/player, a videomonitor, and a single camera (using a variable-focus zoom lens, 11mm-110mm) mounted on a tripod. Two omnidirectional microphones were used to record sound. These were initially mounted on stationary stands. However, as the study progressed, we found that suspending the microphones from the ceiling of the classroom proved to be a less intrusive arrangement, and (as the cords could be left in place from one week to the next) reduced the time needed to set up the equipment.

The camera was operated by a well trained technician using the following guidelines:

1. When the teacher is talking the camera frame should include the teacher and as many of the students as possible.

2. When a student speaks or is called upon by the teacher the camera should be moved, if necessary, so that the student is brought into the frame.

3. In general, whoever is at the focus of the interaction in the classroom should be in the camera frame.

4. If the teacher is moving around the classroom but not speaking, the camera should follow the teacher, keeping the teacher in the center of the frame.

5. If the teacher is stationary but not talking, of if the students are doing seatwork or taking a test, the camera frame should include the teacher and as many of the students as possible.

6. If for any reason the classroom observer feels any of the criteria listed above should be overridden, the observer should move and make the necessary camera adjustments until such a time as normal criteria are once again applicable. This should be noted in the observation protocols and should be explained.

The setting of the interviews. While several studies using stimulated recall have been laboratory-based (e.g., Peterson & Clark, 1978; Housner & Griffey, 1983), the ecological validity of this approach is dubious. The classroom situations studied in such cases were not part of the regular school context: Teachers and students were not acquainted with one another prior to the experiment; the subject matter to be taught was specified by the researchers; time variables were not those of normal school (e.g., the studies took place in the summer, class periods were longer than in the regular school day); and the accountability systems differed (participants were paid, grades did not enter into school records).

As the influences of classroom task environments on teacher thinking processes are not well understood, evidence obtained in experiments which alter these environments in fundamental ways has an ambiguous and debatable relevance to our understanding of how teachers really think in classrooms. The TBS thus followed the general practice of focusing on teaching in a naturalistic setting. That is, regular class sessions were videotaped and used as the basis for the interviews. The interviews themselves were conducted after school in the teachers' classroom. In order to minimize disruptions, only the interviewer and the teacher were present at the interview sessions. Teachers were requested to allow at least 90 minutes for the interview. All interviews were scheduled on the day of classroom videotaping in order to minimize recall problems. When possible, equipment was left in the classroom after videotaping in order to minimize set-up time after school and make more efficient use of interview time.

Interviewers followed written procedures for the preliminary portions of the interviews. Before showing the videotape, the interviewers asked the teachers to describe the class session that had been observed earlier in the day. The teachers were questioned as necessary to insure that these accounts included descriptions of the sequence of events, and the major lesson segments and their goals. The teachers were also asked to evaluate the success of the class session with respect to those goals and to compare the class to their other classes that same day.

The main portion of the interview involved watching and discussing the videotape. The equipment was placed so that it would be accessible to both interviewer and teacher. When researchers or teachers spoke during the course of an interview, the videotape player was turned off in order to obtain clear audio recordings of the comments being made.

There is some variation in stimulated recall research with regard to the segments of the videotape the teacher will be asked to watch. While complete class periods are often videotaped, many researchers use only a portion of the tape in the stimulated recall interviews. Some (e.g., Peterson & Clark, 1978) use short segments of class time selected randomly. Others focus on particular lessons or activities in a given class period. The real-time length of the tape segments used in the interviews ranges from 15 minutes to one-hour.

Additional considerations may influence the selection of tape segments for the interviews. Conners (1978), for example, specified that:

> (a) There had to be verbal interaction between teacher and pupils.
>
> (b) Each lesson had to have a number of phases that involved a variety of teacher and pupil behaviors. For example, a discussion session followed by a seatwork exercise or review of past work followed by the introduction of new work. This strategy was followed to allow for variability in teacher behavior that would provide opportunities for a wide range of principles, rules, beliefs and general teaching behaviors to be exhibited. (p. 82)

The comprehensiveness of the stimulated recall interview has implications which have not been adequately considered. Does the use of fragmentary records for interview purposes influence the types of data that are acquired? Should we be surprised when teachers talk mainly about specific interactions with particular students rather than content-driven vectors of interaction if we are in essence constructing a stimulus (the fragmentary record of their classroom) which would destroy any content-driven vector? In this regard the use of fragments from one class session (the common practice) rather than a series of tapes of successive class sessions on the same topic would seem to promote certain types of findings over others (i.e., findings which show teachers thinking about specific interactions rather than content-related concerns).

Another problem stems from the types of fragments that are selected for stimulated recall interviews. Though selection processes are not always as explicitly specified as in Conners' (1978) case (described above), they would seem to be potentially very important influences on the types of data obtained. If only fragments showing "verbal interaction between teacher and pupils" are used then the likelihood of obtaining data showing teachers thinking of pacing or management concerns geared to pupils would seem to increase. Would such findings also appear if teachers were shown tapes of themselves seated at their desks grading papers while students did seatwork (something one is much more likely to see in secondary as compared to elementary school)?

To avoid some of these problems, stimulated recall interviews in the TBS entailed showing teachers the entire videotapes of their classes: from a few minutes before the tardy bell until the students had left the room at the end of the class period. Once the entire videotape had been viewed, the teacher was asked to compare his or her initial impressions of the lesson with his or her impressions after having viewed the videotape. The interview then concluded, with the interviewer thanking the teacher for participating in the interview.

Frequency of the Interviews. Research on teacher thinking utilizing stimulated recall techniques has varied greatly in terms of the number of stimulated recall interviews conducted with each teacher. The number of interviews has ranged from one (Fogarty, Wang & Creek, 1982; Morine & Vallance, 1975) to ten (Wodlinger, 1980). The total time of the classroom segments used in the interviews ranges from 15 minutes to around six hours. Even here there are additional complicating factors: Of those teachers who were interviewed more than once, some were interviewed with tapes of them teaching different subject matter lessons to the same students (e.g.,

Conners, 1978; Marland, 1977) while some were interviewed teaching the same subject matter lesson to different groups of students (e.g., Colker, 1982; McNair, 1978-79).

In the TBS, four stimulated recall interviews were conducted with each teacher over the course of a semester (a total of about four hours of classtime were viewed). The tapes showed the teachers teaching the same students in the same basic subject matter area. However, the specific lessons showed on the tapes generally differed from interview to interview.

Interview Formats. In many studies using stimulated recall (e.g., Housner & Griffey, 1983; Peterson & Clark, 1978), the researchers themselves are responsible for stopping the tapes (either on a random basis, or on the basis of specific criteria). Some of these studies have relied on structured questionnaires such as the following (Clark & Peterson, in press; see also McNair, 1978-79, for another example of a structured interview schedule for stimulated recall interviews):

1. What were you doing in the segment and why?
2. Were you thinking of any alternative actions or strategies at that time?
3. What were you noticing about the students?
4. How are the students responding?
5. Did any student reactions cause you to act differently than you had planned?
6. Did you have any particular objectives in mind in this segment? If so what were they?
7. Do you remember any aspects of the situation that might have affected what you did in this segment?

(p. 42)

Peterson & Clark asked their questions after the teachers had viewed short fragments of videotape (the first five minutes of class and three one-to-three minute fragments randomly selected). McNair (1978-79) allowed the teachers to stop the tape, framing the task this way:

> As we play the lesson back, please tell me to stop the tape whenever we reach a point where you were consciously saying to yourself, "Let's see, I think I'd better do this now," or "I

> guess I'll try doing this." I may stop the tape myself at a couple of points, but you should tell me to stop it whenever there is a point in the lesson where you know you made a specific decision about what to do next in the lesson. (McNair, 1978-79, p. 27)

McNair (1978-79) also stopped the tape at four points:

> 1) the first time a pupil gave an incorrect answer to the teacher's question; 2) the second or third time the teacher shifted activity in which pupils were engaged; 3) and 4) randomly selected points. (p. 28)

Most other interview systems allow teachers to select points at which they wish to comment on their thoughts or decisions, but also involve the researcher stopping the tape (for example, at some point at which the researcher had determined that an "interactive decision" had taken place).

The point to be drawn from this discussion is that the videotape by itself is not necessarily the "entire" stimulus in stimulated recall interviews. The questions used to elicit explanations of decisions are as much a part of the "stimulus" as are the videotapes or audiotapes of the classes. By asking teachers to discuss alternative courses of action or to evaluate the behavior of the students in the class--or simply by stopping the videotapes at particular points (e.g., when students give incorrect answers), the interviewer may influence how the teacher defines the purpose of the interview and may create a demand structure in which the teacher feels compelled to give reasons or make observations even when these may not represent actual recollections of what they were thinking about as the class was actually being taught.

To avoid some of these difficulties, the TBS conducted two types of interviews: "nondirected" and "directed." In the first, "nondirected" interviews, the videotape was stopped for discussion and comment only at points selected by the teacher. Directions such as the following were used to guide the teachers' performance on the task:

> [The researcher says] I'm going to play back the videotape of your class now. Instead of stopping it and asking you specific questions myself, I'd like for you to stop the tape when you see yourself making a decision and tell me what you were thinking at that point. Examples of decision points might be: making decisions about routines, decisions about discipline, reactions to unexpected or unanticipated events, or moments where you are thinking about content and how it interacts with the students in the classroom.. Also, if you see things on the tape that you want to comment about, even though they aren't exactly decisions, go ahead and stop the tape and talk about those events.

After two non-directed stimulated recalls had been conducted with the teachers, interviewers conducted two more interviews. During these "directed" interviews, teachers continued to stop the tape at their own initiative, and comment on their thoughts, but in addition to this, the interviewers also stopped the tape at a number of loosely specified points--the second or third desist or reprimand to a student; at transition points (when the teacher introduced or wrapped up discussion of a content area, or initiated or ended an activity); at randomly selected points where the teacher elicited some sort of performance from a student or group of students, or at points where a student or students requested information or assistance from the teacher. At these points the teachers would be questioned with such probes as "what were you thinking here?", "what was running through your mind at this point?" and so on.

Sequence of Interviews. The first stimulated recall interviews, scheduled for the early part of the semester, were nondirected. The information obtained in these interviews was used to augment information from the other types interviews being conducted with the teachers and to identify critical incidents in the mind of the teacher early in the semester. The directed stimulated recall interviews were scheduled later in the semester in the hope of reducing the potentially biasing effects of the interviewers' more directive roles.

Underlying theoretical issues in the use of stimulated recalls

Stimulated recall is one of the most important tools of teacher thinking research, as well as a major source of the data collected by the TBS. However, as a method for tapping teachers' thoughts it entails considerable conceptual and practical difficulties. Many of these problems have been pointed out by other researchers, and some are alluded to in the preceding sections; but the different criticisms have not yet been brought together and reviewed in a systematic fashion. Such a review is the aim of the present section.

As has already been pointed out, methodological issues are often indistinguishable from theoretical issues. This is particularly true of research on human cognition. In the present case, many of the methodological problems entailed in the use of stimulated recall interviews are closely linked to fundamental issues in research on thought. For this reason, the section begins with a discussion of some of the general problems of gathering data on thought processes, and traces the rationale for using methods such as stimulated recall.

Gathering evidence on thinking. There is a very fine line between how one conceptualizes thinking and what one considers as evidence of thinking. There is, for example, an inherent circularity in the arguments about the validity of self-reports of thought processes (a major source of data on thinking): the data or evidence which are used to test or support theoretical constructs are themselves products of untested theoretical assumptions. Thus, if one views thinking as entailing the heavily automatized parallel processing of information (e.g., Woods, 1980)--or if cognitive structures are viewed as forms of procedural knowledge (e.g., Rumelhart & Norman, 1981) -- then by definition it is impossible for persons to verbally reconstruct what they are thinking about at any given time. From these perspectives,

self-report data are imprecise and ambiguous reflections of thought. On the other hand, if one adopts a position such as that advanced by Ericsson and Simon (1980), then it is possible to argue that people may have access to their thoughts as they perform tasks. Self-reports taken "on-line," as people perform tasks, can be considered reasonable evidence of thought processes about the task being undertaken -- though even from this perspective the reconstruction of thoughts hours after the fact is of dubious validity. Norman (1983) provides a general overview of some of the major problems encountered in studying cognition:

> Discovering what a person's mental model is like is not easily accomplished. For example, you cannot simply go up to the person and ask. Verbal protocols taken while the person does a task will be informative, but incomplete. Moreover, they may yield erroneous information, for people may state (and actually believe) that they believe one thing, but act in quite a different manner. All of a person's belief structures are not available to inspection, especially when some of those beliefs may be of a procedural nature. And finally, there are problems with what is called the "demand structure" of the situation. If you ask people why or how they have done something, they are apt to feel compelled to give a reason, even if they did not have one prior to your question. They are apt to tell you what they believe you want to hear (using their mental models of your expectations). Having then generated a reason for you, they may then believe it themselves, even though it was generated on the spot to answer your question. (p. 11)

In light of the difficulties of observing and analyzing thought processes in real-world tasks, laboratory-based investigations are sometimes undertaken. But experimental techniques for identifying judgment and decision making processes (such as policy capturing) are hampered by a lack of ecological validity (Ebbensen & Konečni, 1980) -- that is, the experimental task situations may be so far removed from real world task situations as to make the experimental findings incommensurable to real world processes. The usefulness of experimental research on thought processes depends on a thorough (and as yet unattained) understanding of the

nature and relationships of tasks in everyday life and laboratory settings (Cole & Means, 1981; Griffin, Cole & Newman, 1982).

At present, then, process tracing or "thinking aloud" protocols taken while people actually perform tasks are arguably the most valid sources of information about thought processes (Ericsson & Simon, 1980). The general idea is that people have access to the cognitive operations taking place in short-term memory as they perform tasks (this is not the case when they attempt to reconstruct past cognitions). Thus, subjects are asked to carry out some task and to describe (rather than "explain") the thoughts underlying their actions. Such techniques have been used in educational research to study, for example, teacher planning processes (Yinger & Clark, 1983).

There are, however, limitations to this approach. First, it can be used to study cognition only over relatively short spans of time. Activities that span long periods of time or discontinuous segments of time can be studied only in an artificial, snap-shot fashion. For example, the many studies currently using this technique to study writing processes (see e.g., Flower & Hayes, 1980) have an ambiguous relevance to our understanding of how people write papers or articles over many hours, days or weeks. Second, if cognition consists of multiple processes (some of them automatized) taking place simultaneously, then by definition an actor cannot have awareness of all of these processes at once (or serially), let alone produce verbal reports of them. Third, activities that involve social interaction are not amenable to this kind of research: to have the subjects speak aloud about their thoughts would distort the activity itself. To have teachers talk about what they were thinking as they actually taught would transform the activity of teaching. This last consideration has led to the use of "stimulated recall" interviews such as those described earlier.

Conceptual problems of the stimulated recall interview. While stimulated recall interviews provide fascinating and rich information about teachers' views of their classroom practices, it is not always entirely clear how this information should be interpreted. These problems of interpretation center on three issues: 1) the ambiguous status of the findings; 2) the problem of bias in the questioning; and 3) the lack of attention to context or task demands. Each of these issues will be briefly explored.

1. What Are the Findings Findings Of? The stimulated recall interview is a task in which teachers are asked to look at their classrooms from an unaccustomed perspective (as detached viewers looking at video screens) and to describe their thoughts and intentions during the interactions shown on the videotapes. The effects of this unusual task setting have not been well studied and are not really understood. However, teachers' motivations, attitudes, and assumptions about the purposes of the interviews are likely to produce performances that cannot be explained in "purely cognitive" terms (cf. Schoenfeld, 1983).

A related problem stems from the ambiguity of the "stimulus" in stimulated recall interviews. That is, teachers watching videotapes of their classrooms are seeing a different stimulus environment than the one they encountered in actually teaching the class. This is true for two reasons. First, there is a general consensus that human memory involves at least constructive and probably reconstructive processes: constructive in the sense that what is stored in memory is not a direct picture or representation of the perceived environment, but a representation constructed on the basis of prior knowledge and a selective processing of information; reconstructive in the sense that the constructed representation continues to be modified by the on-going processing of information

encountered later (de Beaugrande, 1981; Loftus, 1979). Thus, what the teachers see at the end of the day on the videotape is an event about which they possesses interpretive frameworks quite different from the ones they possessed as the class actually unfolded. The second reason the videotape stimulus is different than the one originally encountered by the teacher is obvious: the film is shot from a perspective different from the teacher's and shows classroom interaction which the teacher could not have seen as the class unfolded (see, e.g., Joyce, 1978-9).

There are other ambiguities in nature of the "stimulus" provided by the videotapes. It is, for example, difficult to know what aspect of the video image the teacher is focusing on during the interviews. It was not uncommon in the TBS research (in the "directed" stimulated recalls) for a researcher to stop the videotape at a point at which some crucial exchange or interaction was taking place and ask open-ended questions (e.g., "Describe what's running through your head here?") -- only to have the teacher begin talking about something seemingly unrelated to the action on the screen. What was happening in these cases? It could be that the interviewers were misconstruing the interaction on the tape, or that the teachers and the interviewers were simply focusing on different aspects of the videotape. In some instances, however, it seemed that the teachers had "lost their places" in the tape (e.g., if the tape showed them interacting with a particular student, they might recall another interaction with this student which had actually taken place at a different point in the class). It could also be that the teachers really didn't remember what they were thinking about, but felt compelled to provide some description of what was running through their minds. Finally, the quality of the videotapes may have hindered teachers' recall (e.g., the tapes showed a teacher and student interacting, but the

teacher can't remember what the interaction is about because he or she can't hear the student's voice on the videotape--though the teacher's part of the interaction may be quite audible).

Even if the the tape is stopped and the teachers provide descriptions of their thoughts and actions that seems comprehensive and compelling to the interviewers, the identity of the "stimulus" that prompted this "recall" may still be unclear. Where, exactly, in the course of the interaction shown on the tape did the teacher begin to "remember," where exactly was the tape stopped, what was it that contributed to the "recall?" On a number of occasions in the "directed" stimulated recalls interviewers conducted unintentional and serindipitous experiments: they would stop the tape and ask teachers for their thoughts just before the tapes were to show the teachers making major shifts or transitions in class (and before the teachers were shown verbally signaling the impending transition).

If the "recalls" were really reflections of "on-line" thinking one would assume that the teachers were anticipating the upcoming transitions. However, this was by no means always the case. In many instances the teachers were seemingly unaware of what they were about to do on the tape. To put this conjecture more generally: Whether the tape was stopped just before, at the beginning, middle, or at the end of an interaction, event, or activity shown on the tape seemed to make a difference (at least in those interviews where the interviewer stopped the tape) in how and what interviewees remembered.

In addition to the unexplored effects of the task situation, and the ambiguity of the "stimulus," other confounding factors make stimulated recall findings difficult to interpret. For example, teachers differ greatly in their verbal facility. Odell (1981), for example, reported that in process tracing studies expert writers sometimes had difficulty

explaining what they were thinking about as they wrote. It seems unreasonable to conclude from this that such writers do not think or make decisions as they write, rather, it must be that their decision making processes are automatized, or that they have trouble articulating their thoughts, or something along such lines. Similarly, the fact that teachers do or do not mention making a decision or considering particular courses of action cannot be taken as evidence that no decisions were made and no alternatives considered.

2. Bias in Questioning. There are a number of problems and ambiguities arising from the kinds of questioning strategies used in stimulated recall interviews. It is a commonplace that the kinds of questions one asks in an interview will influence not only the content of responses to particular questions, but the interviewee's assumptions about the nature and goals of the interview (e.g., Cicourel, 1964, pp. 73-104). In spite of this, questioning strategies in stimulated recall interviews have received little attention -- indeed, except in those cases where structured interview schedules were used, very little information about questioning strategies is provided. This suggests that such common practices as performing content analyses on stimulated recall protocols (e.g., Conners, 1978; Marland, 1977) may be seriously problematic: What is the significance of the finding that around half of teachers' comments focus on students (Clark & Peterson, in press) if the very real possibility exists that the questions addressed to the teachers focused primarily on students and teacher-student interactions (examine the structured interview schedules in Peterson & Clark, 1978, and McNair, 1978-79)?

When structured interview schedules are not used, the implicit biases of researchers may become serious problems. Munby (1982b, pp. 210-213), for

example, has raised reasonable questions about the possibility that researchers' category systems and leading questions may bias the content of stimulated recall interviews. Judgment on this issue is impossible without a close analysis of interview transcripts. However, the issue is not really about bias per se--it is perfectly legitimate for the researcher to focus the teachers' attention on issues important to the research. Instead, the issue is how far one can analyze the data on the assumption that bias does not exist. The views that teachers express about students in stimulated recalls are enlightening, but it is not at all clear that one can count the frequency with which such views are expressed and use that as a measure of what is salient or important to the teacher in the course of classroom interaction (e.g., Clark & Peterson, in press). Additional problems are caused by the implicit assumption in much stimulated recall research that teachers share researchers' definitions of the interview task (Munby, 1982b). One may ask teachers to stop the tape and comment when they see themselves making "specific decisions," but, aside from the problem of whether they could possibly have this introspective knowledge, there is no assurance that they define or understand "decision" in the same way as the researcher or that "decisions" will manifest themselves in an unambiguously fashion in teachers' verbal reports (cf. MacKay & Marland, 1978, pp. 10-11).

3. Context and Task Demands. Stimulated recall interviews have been used to study teacher's thoughts in an enormous range of task situations: Subject matter, time of year, ability level of students, grade level, school environment, familiarity with students, lesson length, and so on, all vary within and across studies. Yet there has been no attention given to the effects of task demands on "interactive" thinking. That is, researchers using stimulated recall techniques have not carried out detailed

examinations of the classroom structures and processes which may shape teacher thinking.

This could be problematic for a number of reasons. In the first place, the videotape alone is an inadequate record of classroom practices. Prior observations are necessary both to build an understanding of the classroom, and to allow for a more efficient use of the videotaping (Corsaro, 1981; Erickson & Wilson, 1982). A second problem stemming from the neglect of context variables is that it tends to produce reductionist arguments. Teachers' behaviors are "explained" as products of intentions or thought processes -- as if these were the sole determinants of action. Little attention is given to how intentions are shaped by career patterns or school environments, or to how thought processes are produced through the interaction of teachers' beliefs and contextual constraints (see Nespor, 1984b). Finally, the lack of attention to contextual factors makes the aggregation of findings across studies extremely treacherous. As Conners (1978) notes, speaking of his own work, even the generalizability of a single study may be limited by a lack of close attention to contextual features:

> The principal limitation of the study refers to the non-standardization of the variables involved in the teacher's task-environment. The variations in the specific objectives of the lessons, the content and experiences involved, the length of the lessons, and classroom organizational patterns, militate against the generalizability of the results from the study. (p. 67)

Implications of the Problems. The real issue raised in the discussion above is not whether stimulated recall interviews are useful sources of information. Rather, the question should be: what are they good for? In a discussion and defense of stimulated recall methods, King and Tuckwell (1983) invoke "constructivist" and "interpretive" arguments for the utility of introspective accounts (e.g., Harré & Secord, 1972). If this is intended

to mean that people create mental representations to account for their environments and actions, there is no argument. Stimulated recall interviews are undoubtedly valuable sources of information on the ways teachers explain and justify their practices -- that is, the are valuable tools for gaining insight into teachers' beliefs about teaching. In practice, however, the proponents of the stimulated recall technique, and teacher thinking researchers in general, make a much stronger claim: namely, that they are dealing with teachers' moment to moment thought processes and decision making during the actual course of instruction. It is against this strong claim that the arguments in this section have been directed.

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